

An Analysis of the Programs
for the Preparation of Prospective Teachers
of Geography in Selected Southern States

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CHAPTER I

INTRODUCTION

Geography has long been a recognized area of the school curriculum, and continues to be whether the curricular approach is by separate subject or by core, elementary or secondary school level. As early as the seventeenth century, Johann Comenius (1592-1670) recognized the need for geography in the schools and offered many suggestions in his writings for geography teachers. Among them were the need for a change to a more rational method of study than the question and answer method and the selection of more valuable material for study.¹ Following Comenius came John Locke, Jean Rousseau, and Johann Pestalozzi. Each of these men realized the importance of geography in the schools and recommended ways by which the subject could be made more meaningful to the pupils taking it.

Geography has been a part of the elementary school curriculum in the United States since about 1825.² During this period it was purely a descriptive subject concerning the earth and including statistics about location, area, population, government, and products. These facts were encyclopedic and were intended to be memorized by the students.

¹W. S. Monroe, Comenius and the Beginning of Educational Reform (New York: C. Scribner's Sons, 1900), pp. 115-116.

²Elwood P. Cubberley, Introduction to the Study of Education (New York: Houghton Mifflin Company, 1925), p. 17.

The opening of the first normal school for teachers at Lexington, Massachusetts, in 1839 provided for instruction in geography of the same type of factual geography that was being taught in the elementary schools. By 1860, some twelve normal schools were in operation in the United States. As the normal schools increased in popularity and in number, a dynamic change evolved in the conception of geography. This change can be traced to the arrival, in 1848, of Arnold Guyot, from Switzerland. Guyot was a disciple of Karl Ritter of Germany and an exponent of Johann Pestalozzi of Switzerland. He brought to the United States Ritter's concept that the starting point in geographical education should be in nature, not in books. It was not until after 1873, however, that the full influence of Guyot's teachings were felt in the American normal schools. Colonel F. W. Parker, a follower of Guyot, began to receive attention in his drive for the improvement of public schools. It was especially during Parker's tenure as head of the Cook County Normal School in Chicago that Guyot's ideas were taught to the geography teachers in the United States.

By 1890, not only had the character of geography changed, but it had become an established part of the normal school curriculum along with reading, writing, spelling, grammar, and arithmetic.³ After the turn of the twentieth century geography continued to be an important subject in all of the public school system. In 1907 David Gibbs wrote:

³Jessie M. Pangburn, The Evolution of the American Teachers College. Teachers College, Columbia University Contributions to Education, No. 500 (New York: Bureau of Publications, Teachers College, Columbia University, 1932), p. 14.

"Geography now stands as the first of the natural sciences in high schools in number of pupils studying it."⁴

Geography remained a part of the curriculum of the teachers colleges as they evolved from the normal schools. Sprague found that geography ranked second to history, as a major field, in the teachers colleges as late as 1932.⁵ She believed that this was a hangover from the normal schools or a result of the elementary education curriculum of the colleges.

Geography has not enjoyed such popularity in the liberal arts colleges and in the larger universities. Fine found that 94 per cent of the liberal arts institutions did not require geography for the undergraduate degree in 1950.⁶ The same situation is found today in the American secondary schools. General Science has replaced geography as the popular natural science course. In the teachers colleges, where geography remains popular, there is much criticism concerning the programs offered, the type of geography courses being taught, and the qualifications of the instructors teaching it.

The type of program in geography would not be a problem if geography was unimportant and an unnecessary part of the curriculum. However, most educators and laymen agree that a knowledge of geography

⁴David Gibbs, "The Pedagogy of Geography," Pedagogical Seminary, XIV (March, 1907), p. 62.

⁵H. A. Sprague, A Decade of Progress in the Preparation of Secondary School Teachers. Teachers College, Columbia University Contributions to Education No. 794 (New York: Bureau of Publications, Teachers College, Columbia University, 1940), p. 150.

⁶Benjamin Fine, "Geography Almost Ignored in College, Survey Shows," The Journal of Geography, L (April, 1951), p. 166.

is important. All but one of 298 college authorities surveyed by Fine⁷ considered geography essential for intelligent citizenship. The need for more knowledge of geography has also been expressed by American servicemen abroad and by other lay people. Many parents expect their children to receive instruction in geography while attending public schools.

There is definitely a need for geography in the curriculum of both teacher education and in the public schools. Interest in geography will not be obtained if teachers are unprepared and uninterested. During the past several decades the curriculum has expanded along with the expansion of knowledge, and each newly developing field of knowledge has tended to demand representation in the curriculum. This has been true both in the public schools and in the teacher education institutions. In addition, the school has accepted the responsibility, once intrusted to the home, for training in health, vocations, and the arts. Thus, an already crowded curriculum results in a vicious cycle which prevents students from acquiring an adequate background in geography before they enter college, and further restricts them from overcoming their deficiencies while they are in college.

As a means of insuring adequate preparation, the several states in the United States have adopted certification regulations. These certification requirements developed along with the normal schools and teachers colleges. The establishment of state normal schools tended to raise the requirements for first-class teaching certificates. This

¹Ibid., p. 166.

gradually led to the improvement of all classes of teaching certificates, and to the centralization of certification in the hands of the state departments of education.⁸ It also brought about the gradual substitution of granting teaching certificates on the basis of education requirements on the part of the teacher rather than on teacher examinations.

In many institutions the state certification requirements determine, to a large extent, the curriculum offered in the preparation of teachers. This is especially true in the field of geography. In such states as Louisiana, North Carolina, and Tennessee, where geography is specifically set down in the state certification requirements for elementary or secondary teachers, the number of institutions offering geography as a part of the teacher education curriculum is high. However, in the states of Texas and Virginia, where geography is not required in the certification regulations, geography is practically ignored in the college curriculum. Concerning certification requirements, Elsbree wrote:

State certification requirements are a rough measure of the educational status of a commonwealth. Where a high degree of centralization exists and the state issues all certificates, and where normal school graduation is the minimum training requirement for teaching in the public schools, the index of educational efficiency will be high. . . . Certificates are really significant to the degree that they represent scholarship and training.⁹

⁸Willard S. Elsbree, The American Teacher (New York: American Book Company, 1939), p. 341.

⁹Ibid., pp. 347-348.

There is agreement that geography is necessary in the teacher education curriculum. Since the curriculum is already crowded, a study is needed to determine the best possible preparation for teachers in geography with the limited amount of time available. This study will attempt to determine what basic knowledge in geography is considered essential for elementary teachers and secondary social studies teachers, and to see in what manner the teacher education institutions in certain southern states are fulfilling these essentials.

Purpose of the Study

It is the purpose of this study to analyze the programs in geography of a selected group of teacher education institutions in the eleven southern states covered by the Southern Association of Colleges and Secondary Schools and to make recommendations for the improvement of these programs. As a basis for comparing the programs, an outline of essentials will be determined for a one-semester introductory course in geography that will be required of prospective elementary teachers and secondary social studies teachers. In making this study the following points will be emphasized:

1. How much geography and what fields of geography should be included in the curriculum for elementary and secondary teachers?
2. To what degree are the teacher education institutions in the selected southern states meeting the minimum requirements as determined in Number 1?
3. What relationship exists between certification requirements in geography and courses taught and content of the courses?

4. What specific recommendations may be made for the improvement of geography programs for the prospective elementary teachers and the prospective secondary social studies teachers in the eleven southern states?

Definition of Terms

In this study the following terms will be used:

1. Elementary school will include Grades I through VI.
2. Elementary teachers are those persons teaching Grades I through VI.
3. Secondary school will include Grades VII through XII, and includes the junior high school and senior high school levels.
4. Secondary teachers are those persons teaching Grades VII through XII.
5. Teacher education institutions are those four-year degree granting colleges and universities with departments or colleges that offer curricula for the preparation of elementary and secondary teachers.
6. Geography is the science of place, its attributes and their relationship.

Limitations of the Study

The study will be limited to:

1. The sixty-three four year institutions in the eleven southern states covered by the Southern Association of Colleges and Secondary Schools that are accredited by the Association, that prepare both elementary teachers and secondary social studies teachers, and

are willing to take part in the study.

2. The geography courses, in the selected institutions, that are required for graduation of students preparing to be elementary teachers or secondary social studies teachers or are required for certification by the state in which the institution is located.

Need for the Study

There seems to be little doubt that students preparing to be elementary teachers or secondary social studies teachers need some geography in their profession. Providing the best possible preparation in an already crowded curriculum requires careful analysis to determine what is essential for teachers of geography in the public schools. This seems especially necessary since most of the students will not be preparing themselves as specialists in geography and in many cases will not even be geography majors. Therefore, it will be necessary to determine what should be considered essential for the average elementary or secondary teacher, and then to compare this with the subject matter in the required geography courses in the selected states. There is also the necessity for determining the role of certification requirements as means of guaranteeing that future teachers obtain the preparation in geography deemed essential.

Methods, Procedures, and Sources

1. The Education Directory, Part 3, Higher Education, United States Department of Health, Education, and Welfare was used to determine the list of accredited teacher education institutions in the selected states.

2. Catalogs of all accredited teacher education institutions were studied to determine the names of the institutions to be sent the initial questionnaires.

3. A jury was used to help determine the essentials in the outline of the introductory course in geography for prospective teachers. This jury was selected on the basis of leadership in geographic organizations, contributions to the field of geography, and geographic publications.

4. An initial questionnaire was sent to each accredited teacher education institution in the eleven southern states covered by the Southern Association of Colleges and Secondary Schools requesting information as follows:

a. The number of graduates in the various teacher education programs during the period June 15, 1954 to June 15, 1955.

b. The name of the person in charge of the elementary program and the name of the person in charge of the secondary program.

c. An indication as to whether the institution was willing to take part in the study.

d. The designation of a person to be responsible for the second questionnaire concerning the geography program.

5. A second questionnaire was sent to the person designated by the dean, in the initial questionnaire, in those institutions willing to take part in the study. This questionnaire was to obtain information concerning the program in geography. Specifically information as

follows was requested:

- a. The name(s) of the course(s) in geography required of students preparing to teach in the elementary school and to teach social studies in the secondary school.
- b. The name(s) of the textbook(s) used in the required course(s).
- c. A comparison of the material in the required course with the material included in the writer's outline of essential material.
- d. The name(s) of the course(s) taught as part of general education, but contain(s) subject matter from geography.
- e. The name(s) or type(s) of supplementary material used, such as visual aids, field trips, and laboratory equipment.
6. Certification requirements were obtained from each of the forty-eight states to determine the courses in geography required for certification of elementary teachers and secondary social studies teachers.

Organization of the Study

Chapter II reviews the procedure for securing data. It explains how the jury was selected, and how the content for the outline of the proposed course in geography was determined.

In Chapter III, the jury's ideas and opinions concerning the outline of the proposed course in geography for public school teachers are compared with the requirements in geography for teaching certificates in the southern states.

Chapter IV is an analysis of the data obtained from the questionnaires returned by sixty-three institutions taking part in the study. This includes the various tables which summarize the data concerning the types of programs offered, organization of courses, and answers to questions about the outline of the proposed course.

The programs in elementary education and the programs in secondary social studies offered by the colleges and universities in the southern states are analyzed and discussed in Chapter V.

Chapter VI summarizes the study and ends with statements concerning the conclusions and recommendations.

CHAPTER II

PROCEDURE FOR SECURING DATA

As stated in Chapter I, the problem was to determine an outline of essential material for an introductory course in geography, and to use this outline in analyzing the programs in geography for the preparation of elementary teachers and secondary social studies teachers in a selected group of teacher education institutions in the eleven states accredited by the Southern Association of Colleges and Secondary Schools.

After the problem had been decided upon and the criteria set up for selecting the institutions, the Education Directory¹ was used to determine the names and addresses of all institutions in the eleven southern states that were accredited and that had programs for the education of elementary and secondary teachers. From this publication 146 institutions were selected. A post card was sent to the registrars of these institutions requesting a copy of the latest college catalog. Each of the catalogs was studied to determine whether programs were offered for the education of elementary and secondary teachers. The catalogs were also used to check the reliability and recency of the data found in the Education Directory. In addition, the catalogs were

¹U. S. Department of Health, Education and Welfare, Education Directory, Part 3, Higher Education (Washington: Government Printing Office, 1955).

used to ascertain whether courses in geography were available, and if geography was required of prospective elementary teachers and secondary social studies teachers. When there was doubt about geography being required, the institution was listed with those colleges and universities requiring geography. Lastly, the catalogs were used to obtain the names of the deans of the smaller colleges and the heads of the schools and colleges of education in the larger universities.

Each of the college deans and heads of the schools or colleges of education was sent a preliminary questionnaire² to determine if the institutions offered courses for the preparation of elementary and secondary teachers, and if so the number of graduates in each category for the period June 15, 1954 to June 15, 1955. The deans were also asked for the name of the person in charge of elementary education and of secondary education, and the name of the instructor who taught geography to prospective teachers. In addition, they were asked for the name of the geography courses, if any, that were required of each of the two categories of prospective teachers. Lastly, the administrator was asked if he would be willing for his institution to take part in the study. Of 146 questionnaires mailed, 114 or 78 per cent were returned. Seventeen institutions did not desire to take part in the study. Of these seventeen colleges that did not desire to take part, fourteen did not have a geography department or a geography program and three gave no reason for declining. Ninety-seven colleges and universities expressed their willingness to take part (Table 1), but

²See Appendix B.

TABLE 1

DISTRIBUTION OF QUESTIONNAIRES SENT TO 146 TEACHER
EDUCATION INSTITUTIONS IN ELEVEN SOUTHERN STATES

State	Total Number of Initial Question- naires Mailed	Number of Initial Question- naires Returned by Colleges	Of Those Returned No. of Colleges Not de- siring to partici- pate	Number of Colleges Not Meeting Criteria	Number of Follow-up Question- naires Not Returned by Colleges	Number of Insti- tutions Partici- pating in Study
Alabama	13	12	2	4 ¹	2	5
Florida	9	7	0	1	0	6
Georgia	14	10	1	2	2	5
Kentucky	16	13	0	1	1	11
Louisiana	8	7	0	0	2	5
Mississippi	7	6	1	0	2	3
North Carolina	21	16	3	3	1	9
South Carolina	7	6	3	3 ¹	0	2
Tennessee	17	12	1	1 ¹	4	7
Texas	23	17	3	7 ¹	1	9 ²
Virginia	11	8	3	6 ¹	0	2
Totals	146	114	17	28	15	64

¹Eleven of the institutions not meeting the criteria were willing to take part in the study.

²One of the follow-up questionnaires was not completed sufficiently to tabulate and use in the study.

only seventy-nine of this group required geography of either elementary or secondary teachers or both. Figure 1 shows a map of southern states and the locations of the institutions included in this study.

Selection of the Jury

The publications of the Association of American Geographers, the American Geographical Society, and the National Council of Geography Teachers were studied to obtain the names of prominent geographers in these organizations. Prominence was determined by:

1. Members holding positions of leadership in geographical organizations.
2. Interest in the education of geography teachers.
3. Publications in geography periodicals.
4. Publication of introductory texts.

In addition to periodicals, all available textbooks in geography were studied for a list of the authors. The World Directory of Geographers³ and the College Geography Directory of the United States⁴ were used to obtain the names of prominent geographers as well as their fields of interest in geography. Lastly, suggestions were requested from members of the faculty of the Department of Geography of the University of Florida. From all of these sources twenty-one

³World Directory of Geographers (New York: International Geographical Union, 1952).

⁴Department of Geography, College Geography Directory of the United States. (Lexington, Kentucky: University of Kentucky Press, 1951-52).

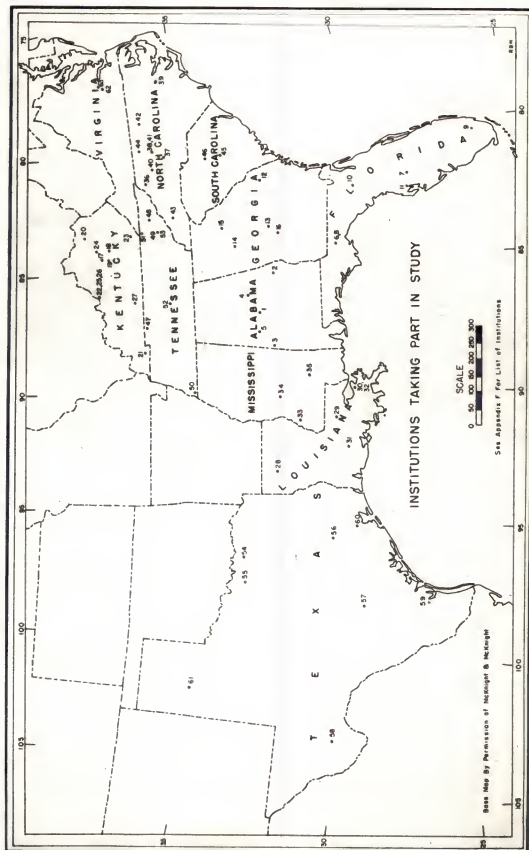


Figure 1

geographers were selected who met the criteria that had been previously set up for the selection of the jury. Letters were written to these geographers requesting that they serve as members of the jury to help determine what might be considered essential in a basic course in geography for prospective teachers.⁵ Thirteen persons agreed to serve as members of the jury, five declined, one was abroad for a year, and two did not answer. Of the thirteen that agreed to serve as members of the jury twelve actually took part. The following geographers served as members of the jury:

1. Dr. Esther S. Anderson, Professor of Geography, University of Nebraska, Lincoln, Nebraska.
2. Dr. Loyal Durand, Jr., Head of Department of Geography, University of Tennessee, Knoxville, Tennessee.
3. Dr. Edna Eisen, Professor of Geography, Kent State University, Kent, Ohio.
4. Dr. Otis W. Freeman, Professor of Geography, State Teachers College, Indiana, Pennsylvania.
5. Dr. Richard M. Highsmith, Jr., Professor of Geography, Oregon State College, Corvallis, Oregon.
6. Dr. Preston E. James, Chairman of the Department of Geography, Syracuse University, Syracuse, New York.
7. Dr. Henry M. Kendall, Chairman of the Department of Geography, Miami University, Oxford, Ohio.
8. Dr. Clyde F. Kohn, Associate Professor of Geography, Northwestern University, Evanston, Illinois.
9. Dr. Neville Scarfe, Dean of Education, University of Manitoba, Winnipeg, Manitoba, Canada.
10. Dr. Clarence W. Sorenson, Professor of Geography, Illinois State Normal University, Normal, Illinois.

⁵See Appendix C.

11. Dr. Zoe A. Thralls, Professor of Geography, University of Pittsburgh, Pittsburgh, Pennsylvania.
12. Dr. Jesse H. Wheeler, Associate Professor of Geography, University of Missouri, Columbia, Missouri.

Selection of Essential Material
for Introductory Course

Before organizing the outline for an introductory course in geography for prospective teachers, it was necessary to know the objectives or aims of such a course. In determining the objectives it was, first of all, essential to have an understanding of what geography the elementary and the secondary social studies teachers are expected to teach in the public schools. Most of the textbooks written for the elementary grades are of the travel type in which the students are taken on a trip through the various countries that are located within the area of the world covered by the text. In such texts the relationships between the natural and cultural environments may often be lacking. The teacher can learn what is in the text but still lack the background necessary for explaining these relationships. In a course of study in geography worked out by the State Production Committee of the Department of Public Instruction of the State of Pennsylvania, the following problems in geography in the secondary schools were listed:

1. Geography should emphasize the interrelationships of man and his natural and cultural environment.
2. Geography should be concerned with the distribution of social and natural phenomena within the local community, state, nation, and the world. It deals with people and the ways in which they live and make a living and shows how their lives are

related to the natural factors of climate, topography, soil, natural resources, and other elements of the natural environment.

3. Geography must be dynamic, not static. Man and nature are constantly making changes in the physical environment. These changes which are frequently world-wide in their scope have repercussions which affect the present and the future.

4. Geography has as its aims the observations, description, analysis, and interpretation of the regions of the world as to their natural and cultural settings.⁶

The second point that had to be taken into consideration was the deficiency in the background in geography of most college students. The majority of students in college have not had any geography since the seventh or eighth grade, so an introductory course must be taught as though the students were beginning a new subject. A third point was that the objectives should differ from those characteristics of a general education course in introductory geography in that the student was expected to achieve more than an appreciation of and a cultural view of the subject. Keeping these points in focus, the general objectives may be stated:

1. The course should teach principles, relationships, and the tools of geography.

2. The course should be a foundation course upon which the prospective teacher could build and expand his knowledge of geography.

After the general objectives were determined, the specific aims of the course had to be ascertained. There is some general agreement among geographers that all students need an understanding of the physical features of the earth, the distribution of man upon the

⁶State Production Committee, Course of Study in Geography For Secondary Schools, Bulletin 412 (Harrisburg, Pennsylvania: Commonwealth of Pennsylvania, Department of Public Instruction, 1951), pp. 17-18.

earth, the activities of man including his economic adjustment to the natural environment, and a knowledge of the use of the tools of geography, namely maps, globes, charts, graphs, and pictures. The course was to cover four aspects of geography: physical, economic, social, and political. The physical phase was to be stressed more than the other three because all serious and sound human geography should be based upon physical geography⁷ and studies have shown that the questions asked frequently in geography classes by in-service teachers pertained to physical geography.⁸ Most of the elementary texts used by these teachers stress human geography without providing the necessary physical background. Therefore, the specific objectives of the course should be to teach:

1. The generalized global pattern of physical features.
 - a. Climate
 - b. Topography
 - c. Natural vegetation and animal life
 - d. Soil
 - e. Mineral resources
2. Regional differentiation.
3. The location of the climatic regions of the world.
4. The distribution of man upon the earth.
5. The activities of man including man's adjustment to both the natural and social factors of environment.
6. The understanding and conservation of natural resources.

⁷Jean Brunhes, Human Geography (New York: Rand McNally and Company, 1952), p. 30.

⁸Lyda Belthuis, "How Shall We Teach Our Prospective Geography Teachers," The Journal of Geography, XLVIII (April, 1949), p. 146.

7. The location of some of the political units of the world.
8. The tools of geography—how to secure geographic information through the interpretation of globes, maps, charts, graphs, and pictures.

How could the material in the outline best be organized to achieve the objectives as listed? Most geographers agree that introductory geography can be taught either regionally according to political regions, such as countries or groups of countries, or systematically with such topics as climate, topography, soils, and mineral resources. The latter method may employ physical regions such as climatic regions.

The writer decided that the outline for the introductory course in geography would be partly systematic for background purposes, and the major part would be based upon climatic regions. This approach was used because the writer feels that:

1. Climate is the most basic element of the natural environment.
2. Climate affects other basic elements of the natural environment.
3. Climatic regions are fairly homogeneous in character.
4. Climatic regions are relatively few in number. Eleven were used in this study.
5. Climatic regions offer students the opportunity to observe the close relationship between man and his environment.

The introductory college textbooks in use today were carefully

read for arrangement and content, and the use for which they were intended.⁹ The leading geographical periodicals, especially the Journal of Geography, were also studied for research articles and recent trends in the geography curriculum. This information was useful in determining the objectives listed above, the approach to be used in the outline, the main topics and their arrangement, and the items to be included since the writer had to consider what the teachers in geography felt was necessary in their respective grades.

The outline was given to five members of the geography staff of the Department of Geography at the University of Florida to be read and criticized for clarity and content. These five individuals acted as members of a pilot study group to check the outline before it was sent to the jury.

After the suggestions, corrections, and omissions were made by the pilot study group, the outline¹⁰ was sent to the members of the jury who had previously agreed to criticize it. The criticisms and suggestions made by the jury were incorporated as far as possible into the revised outline and this was sent to the geography instructors of the seventy-nine selected colleges and universities.¹¹ Along with the outline, each institution was sent a four-page questionnaire requesting information pertaining to the introductory course as taught at the particular college.¹²

⁹See Appendix G.

¹⁰See Appendix H.

¹¹See Appendix I.

¹²See Appendix E.

If a geography instructor in a participating institution did not closely follow the arrangement of the material in a particular geography text, he was asked to check the items in the outline that were included in the course taught at his college or university. The instructor was also requested to add any material taught at his institution that was not included in the outline or the text used.

Questions were included in the Questionnaire to determine who formulated the course requirements. This information was used to ascertain whether the institution set up the requirements for the courses in geography or if the requirements were originated by the state departments of education.

The courses required in the various colleges and universities were compared with the state requirements in geography for certification of elementary teachers and secondary social studies teachers. From these comparisons a partial conclusion could be drawn as to whom was responsible for setting the requirements in geography for public school teachers. The certification requirements of each of the states, other than the selected southern states, were also obtained from the various state departments of education. The certification standards of the states were studied to find out how the requirements in geography in other parts of the United States compared with the requirements in the eleven southern states selected for this study.

CHAPTER III

COMPARISON OF JURY'S STANDARDS WITH REQUIREMENTS IN GEOGRAPHY FOR CERTIFICATION OF PUBLIC SCHOOL TEACHERS IN ELEVEN SOUTHERN STATES

In the preceding chapter, the procedure for selecting the jury and for constructing an outline of a proposed course in geography for public school teachers was explained. The purpose of this chapter is to compare the essential material in the outline and the jurors' opinions concerning the content of an introductory course with the requirements in geography necessary for certification of elementary teachers and secondary social studies teachers.

Thirteen prominent geographers agreed to serve as members of the jury, but only twelve returned the outlines and actually took part in the study. The jury consisted of nine men and three women representing five state universities, four private universities, and three teachers colleges. Eight members of the jury had written introductory texts in college geography, and two members had published texts for students in the elementary grades.

The writer realized that it would be almost impossible to develop an instrument which would be acceptable to all members of the jury, regardless of the approach used in developing the outline. Thus, the philosophical beliefs held by geographers were intentionally not considered in determining the criteria for selection of jury members so that a representative sample of American geographers might be obtained.

With such a group the writer could obtain a fairer evaluation of the outline.

Before constructing the outline, the writer made the assumption that only one three-semester hour course would be taken by the prospective teachers. This assumption was made because the curriculum for teacher education is already crowded, and with each branch of knowledge seeking its place in the curriculum there is a limit to the number of courses that a student can take during four years of college. Only sixteen states in the United States require any geography for the certification of elementary teachers, and nine require courses in geography for the certification of secondary social studies teachers. Thus, the minimum amount of geography assumed essential by the writer exceeds that found in the certification requirements of approximately two-thirds of the states in the United States.

The original outline¹ was sent to each of the thirteen members of the jury. Each member was asked to arrange the sequence of the chapters in the order that he believed the chapters should occur. In addition, each juror was requested to mark opposite each item in the outline the letter "I" if he considered the item indispensable, "D" if he thought the item desirable, and "U" if he deemed the item unnecessary.

The outline sent to the jury consisted of seventeen chapters. Chapters 1 through 4 were included in Part I, and Chapters 5 through 17 made up Part II.

In analyzing the results of the jury's ideas concerning the

¹See Appendix H.

arrangement of the chapters, it was found that there was far more agreement in Part I of the outline (Table 2) than there was in Part II of the outline. The greatest amount of agreement was found in Chapter 1. All but one of the members of the jury agreed that a

TABLE 2

JURY'S ARRANGEMENT OF SEQUENCE OF CHAPTERS IN
OUTLINE OF PROPOSED COURSE IN GEOGRAPHY
FOR PROSPECTIVE TEACHERS

Chapter Number	Number of Jury Members Agree- ing with Chapter Number	Number of Jury Members Disa- greeing with Chapter Number	Number of Jury Members Opposed to Climatic Regions
1	11	1	
2	10	2	
3	6	6	
4	8	4	
5	6	2	3
6	6	2	3
7	6	2	3
8	6	2	3
9	6	2	3
10	6	2	3
11	6	2	3
12	6	2	3
13	6	2	3
14	6	2	3
15	6	2	3
16	6	2	3
17	4	5*	3

*Three members of the jury opposed this chapter. They thought that the content of the chapter should be changed.

statement should be made at the beginning of the outline defining geography and specifying what the writer included in the field of geography. It also included the objectives of the course in geography. The one jury member who disagreed with this arrangement felt that the

definition of geography should be used at the end of the outline as a summary of the course.

In Chapter 2 there was also a high degree of agreement. Since "place" is one of the fundamental attributes of geography, and maps and globes are instruments to represent locations upon the surface of the earth, all of the jury agreed that this chapter was necessary. Two of the jury, both representatives of teacher education institutions, felt that this chapter should be placed later in the outline.

The greatest amount of disagreement concerning any of the chapters in Part I was found in Chapter 3. Half of the jury agreed with its place in the outline, as Chapter 3, while the other half thought that it should be located elsewhere. One of the six, who disagreed with its location, felt that it should be numbered Chapter 2, one believed the chapter should be fourth, while the remaining four members held the opinion that it should be either near the end of the outline or at the end.

Concerning Chapter 4, eight of the jurors agreed with the position of the chapter and four disagreed. Two of the four felt that Chapter 4 should be numbered three, while the other two members thought that it should be next to the last chapter in the outline.

There was much more disagreement in Part II than in Part I. The same pattern was found throughout Chapters 5 through 16. Two of the jury rearranged the entire sequence of the chapters, and as a result there was disagreement concerning the chapter numbers by two of the jurors for each of the chapters five through sixteen. The remaining members of the jury agreed with the arrangement. Minor

changes in the chapters were suggested, such as changing a few of the terms or the consolidation of two climatic regions into one region. This latter suggestion was made for Chapters 10 and 11 and for Chapters 14 and 15.

Three of the members of the jury felt that Chapter 17 was not consistent with the rest of the outline, and they did not believe that the chapter belonged at the end. They thought that this chapter should be used to show the interrelationships of societies and economies, including some of the political states of the world. Six members of the jury agreed with the position of the chapter. Two of these six members were from that group of the jury which opposed climatic regionalism in geography. One of the two remaining persons felt that Chapter 17 should be numbered 3, while the other jury member thought that the chapter should be numbered 16.

The original outline consisted of seventeen chapters which were subdivided into a total of 586 items or subdivisions. In tabulating the results of the jury, it was found that a total of thirty-one items in the outline were marked "U", unnecessary, by one or more members of the jury; and 177 items were marked "D", desirable, by one or more members of the jury. The remaining 403 items were checked as "I", indispensable, in an introductory course in geography for prospective teachers by those members of the jury who checked the items. Of the thirty-one items marked "U" by one or more members of the jury, only two of the items were marked "U" by as many as three persons on the jury. Thirty-two items (Table 3) out of a total of 177, were marked as desirable by three or more members of the jury.

TABLE 3

ITEMS IN OUTLINE OF PROPOSED COURSE IN GEOGRAPHY MARKED
DESIRABLE BY THREE OR MORE MEMBERS OF JURY

Chapter Number	Item Number	Item	Number of Jury Members Marking Item Desirable
2	A 1 b	Relationship with the moon--tides	4
2	B 2 b	Types of Globes	3
2	C 5	Map Direction	3
2	C 5 a	True North	3
2	C 5 b	Magnetic North	3
3	A 2	Changes in Population Number by Continent	3
3	B	Bases For Population Change	3
3	B 1	Factors Affecting High Birth Rate	3
3	B 2	Factors Affecting Low Birth Rate	3
3	B 3	Factors Affecting Death Rate	3
3	B 4	Migration	3
3	C 1	Relationship of Population Distribution to Physical Environment	3
3	C 3	Relationship to Language and Religion	4
3	D 2	Problems of Overpopulation	4
3	D 3	Popular Solution For Overpopulation	3
4	A 3	The Carbon Dioxide Cycle	3
4	D 4	Immature Soils, Alluvial Soils, Bog Soils	3
5	C 4	Imported Animals	3
5	E 2	Differences in Cultures of People in Various Tropical Rain Forests	3
5	E 3	Effect of Coastline Upon Distribution of Population, Culture, and Economies	3
5	F 4	Mining	3
7	E 2	Tropical Deserts as Birthplace of Monotheistic Religions	3
9	F 2	Effect of Coastline Upon Distribution of Population, Culture, and Economies	3
9	G 1 c	Southern Chile--types of Crops Raised and Locations	3
9	G 1 d	Tasmania and New Zealand--types of Crops Raised and Locations	3
9	G 2 b	Sheep--locations	3
10	G 1 b (2)	Southern United States--types of Crops Produced and Locations	3
10	G 3 b	South America--Agricultural Products Produced and Locations	3
10	G 4	Fishing	3
10	G 4 a	Types of Catch	3
10	G 4 b	Locations	3
12	F 2 c	Manchuria and Northern Japan--Types of Animals Raised and Locations	3

All of the jury did not concur with the approach taken by the writer in constructing the outline. Three of the jury members disapproved of teaching introductory geography according to climatic regions. Two of this group have written introductory texts based upon their philosophical convictions. Seven members of the jury agreed with the approach taken by the writer, and one member of the jury did not like geography taught according to climatic regions, although she had been teaching prospective teachers by this approach for many years.

Two of the members who disagreed with the writer's approach in Part II checked the items in Part I of the outline and approved of the chapter titles and material contained therein. However, they were so philosophically opposed to Part II that they did not feel that they could check the items in this section. One member of this group did check all of the items in the outline in spite of his opposition to the use of climatic regions.

It seems difficult for a geographer, who has written an introductory text, to concur with an outline which differs markedly from the text. This became apparent as the jury results were studied. "The Population of the World" was placed as the third chapter in the outline because the writer felt that man, the cultural part of geography, should follow a study of the earth, the physical division of geography. Two members of the jury disagreed with the location of this topic. They believed that it should be placed at the end of the outline. Both of these jury members had followed this approach in their introductory texts.

Excluding the two members of the jury who disapproved of the climatic regional approach and did not check the items in Part II, most of the jurors offered only minor changes in a few of the chapters. The majority of these members believed, as did the writer, that an introduction or general survey of the physical and cultural factors of geography were necessary before attempting to study the various climatic regions of the world. Two members of the jury opposed this arrangement. These two members felt that each of the various climatic regions should be studied descriptively and the chapters on the earth, the population, and the basic natural resources should be used as summaries in tying together the material learned about the climatic regions, rather than using these chapters as an introduction to the study of the climatic regions.

In summing up the findings of the jury, a majority felt that an introductory course in geography should be taught as principles of geography in which are emphasized the natural features of the world and the way that man has utilized these natural features in building cultures and obtaining the necessities of life.

Most prominent geographers agree that one course, such as the principles course recommended by the jury and outlined in this study, is the minimum to include in the teacher education program.² The problem is how this best can be accomplished. The states can assure that at least one course in introductory geography is included in the teacher education program of the institutions located within the states

²Taken from sixty-three questionnaires received from accredited colleges and universities in eleven states.

by including the course in the certification requirements for teachers. All of the states in the United States have set up certification requirements as a means of licensing teachers to teach in the public schools. If the state departments of education required that a course in geography be included in the certification requirements, the colleges would teach the subject so that the teachers could be certified to teach in the state in which the college is located. The administrators of colleges make certain that all courses that are required for general certification are taught in the teacher education institutions. A dean of one of the colleges not desiring to take part in this study stated that only three courses in geography were taught in the college, and these courses were only taught because state certification requirements included them.

Of the eleven states included in this study, only five specifically required that one or more courses in geography be included in the college program. These were Florida, Kentucky, Louisiana, North Carolina, and Tennessee. The certification requirements of Alabama, Georgia, Mississippi, South Carolina, and Virginia specified that geography could be selected from a group of subjects, usually: history, science, economics, or sociology to satisfy the certification requirements. Only Florida and Tennessee, of the above listed southern states, require geography of both elementary and secondary social studies teachers. Alabama specified that geography may be selected from a group of social studies for the certification of elementary teachers as well as for secondary social studies teachers (Table 4). Texas did not require geography of either elementary or secondary

social studies teachers.

Louisiana and North Carolina both specified in the state certification requirements what courses in geography should be taken to fulfill the requirements for the elementary teaching certificate. To receive the elementary certificate in the state of Louisiana, each prospective teacher must take one three-semester hour course in

TABLE 4
CERTIFICATION REQUIREMENTS IN GEOGRAPHY
IN ELEVEN SOUTHERN STATES

State	Geography Required for Certi- fication		Geography May be Selected from Several Fields		Geography Not Required for Certi- fication	
	Ele- mentary	Second- ary	Ele- mentary	Second- ary	Ele- mentary	Second- ary
Alabama			x	x		
Florida	x	x				
Georgia*			x	x		
Kentucky*		x	x			
Louisiana	x			x		
Mississippi			x	x		
North Carolina**	x			x		
South Carolina***			x	x		
Tennessee	x	x				
Texas					x	x
Virginia				x	x	

*Conservation of Natural Resources required but does not have to be taught by geography department.

**Two courses specifically required. Three semester hours of Principles of Geography and three semester hours of Regional Geography.

***Growth and Development of South Carolina required. This may or may not be taught by geography department.

General Geography. The state of North Carolina required that each prospective elementary teacher take three semester hours of Principles of Geography and three semester hours of Regional Geography.

The eleven southern states covered by the Southern Association of Colleges and Secondary Schools compared favorably with the states in the regions covered by the four other accrediting associations. Of the six states in the New England Association only one required (Table 5) geography in the preparation of either elementary or secondary social studies teachers. Five states comprise the Middle States Association. Two states in this association, New Jersey and Pennsylvania, required that geography be included in the program for the preparation of elementary teachers. The North Central Association contains the largest number of states of any of the accrediting associations. Of the nineteen states in the association, eight required geography in the preparation of elementary teachers and five states required geography for the certification of secondary social studies teachers. Four of the five states requiring geography for the secondary social studies teachers were included among the eight that specified geography in the teacher education program of elementary teachers. Oregon was the only state of the seven states in the Northwestern Association that required geography in the education of either elementary or secondary teachers.

From the above comparison of requirements in geography for certification, it was found that the North Central Association included the largest number of states that required geography. Nine

TABLE 5

STATUS OF GEOGRAPHY IN THE STATES COVERED BY ALL
REGIONAL ACCREDITING ASSOCIATIONS OTHER
THAN THE SOUTHERN ASSOCIATION

State and Association	Geography Required For Certification		Geography May Be Selected From Several Fields		Geography Not Required For Certification	
	Ele- mentary	Second- ary	Ele- mentary	Second- ary	Ele- mentary	Second- ary
NEW ENGLAND						
Connecticut				x	x	
Maine					x	x
Massachusetts					x	x
New Hampshire	x					x
Rhode Island					x	x
Vermont					x	x
MIDDLE STATES						
Delaware					x	x
Maryland				x	x	
New Jersey	x			x		
New York					x	x
Pennsylvania	x					x
NORTHWEST						
California				x	x	
Idaho					x	x
Montana				x	x	
Nevada					x	x
Oregon	x					x
Utah					x	x
Washington			x			x

TABLE 5 (Continued)

State and Association	Geography Required for Certification		Geography May Be Selected From Several Fields		Geography Not Required For Certification	
	Elementary	Secondary	Elementary	Secondary	Elementary	Secondary
NORTH CENTRAL						
Arizona					x	x
Arkansas	x					x
Colorado					x	x
Illinois			x	x		
Indiana	x	x				
Iowa	x					x
Kansas	x			x		
Michigan	x					x
Minnesota					x	x
Missouri	x	x				
Nebraska					x	x
New Mexico					x	x
North Dakota					x	x
Ohio	x	x				
Oklahoma			x	x		
South Dakota					x	x
West Virginia	x	x				
Wisconsin		x			x	
Wyoming					x	x

of the nineteen states in the association required geography in the preparation of either elementary teachers or secondary social studies teachers. The Southern Association, comprising eleven states, had five that required geography in the preparation of prospective elementary or secondary social studies teachers. Reduced to a percentage of the total states in each of the two associations, the North Central Association had 47 per cent of the states requiring geography, and the Southern Association had 45 per cent of the states located within its borders.

Description of Requirements in the States

The following outline gives a brief description of the requirements for teaching certificates in the eleven southern states accredited by the Southern Association of Colleges and Secondary Schools. The information was obtained from the latest certification bulletins published by the state departments of education of the various states. The descriptions of the certificates and requirements deal only with those items that are pertinent to this study. This includes the name of the certificate, the college credit required, the geography required, and the requirements for a major in secondary social studies. Except for the Permanent Elementary Certificate issued by the state of Texas, only those teaching certificates requiring four or more years of college work are listed. The minimum requirement for the elementary certificate in Texas is two years of college preparation.

AlabamaElementary Professional Certificates--Class B

College credit required--completion of four year--elementary curriculum, including a bachelor's degree in elementary education.

Geography required--eighteen semester hours of social studies, including courses of at least four semester hours in three of the following; history, economics, political science, sociology, or geography.

Elementary Professional Certificate--Class A

College credit required--master's degree.

Geography credit required--same as for Elementary Professional Certificate--Class B.

Elementary Professional Certificate--Class AA

College credit required--Elementary Professional Certificate--Class A plus thirty semester hours of graduate work in an approved institution.

Geography required--same as for Elementary Professional Certificate--Class B.

Secondary Non-Professional Certificate--Class B

College credit required--completion of work leading to a bachelor's degree from an accredited college or university.

Geography required--basic courses must include twelve semester hours of social studies, including courses of at least four semester hours in two of the following; history, economics, political science, sociology, or geography.

Major field credit required--eighteen semester hours in an approved subject.

Secondary Professional Certificate--Class B

College credit required--bachelor's degree from an approved college or university.

Geography required--same as for Secondary Non-Professional Certificate--Class B.

Major field credit required--twenty-four to thirty semester hours major in an approved subject.

Secondary Professional Certificate--Class A

College credit required--master's degree from a standard college or university in a curriculum approved for the education of secondary school teachers.

Geography required--same as for Secondary Non-Professional Certificate--Class B.

Major field credit required--same as for Secondary Non-Professional Certificate--Class B.

Secondary Professional Certificate--Class AA

College credit required--Class A Secondary Professional Certificate plus thirty semester hours of graduate work in an approved institution.

Geography required--same as for Class A Certificate.

Major field credit required--same as for Class A Certificate.

FloridaGraduate Certificate--Elementary

College credit required--four-year graduate from a standard institution.

Geography required--six to twelve semester hours of social studies, which must include work in Conservation of Natural Resources.

Post Graduate Certificate--Elementary

College credit required--master's degree from a standard institution.

Geography required--same as for Graduate Certificate--Elementary.

Advanced Post Graduate Certificate--Elementary

College credit required--earned doctor's degree from a standard institution.

Geography required--same as for Graduate Certificate--Elementary.

Graduate Certificate--Secondary

College credit required--four-year graduate from a standard institution.

Geography required--Conservation of Natural Resources must be included in thirty semester hours of social studies.

Major field credit required--thirty semester hours of social studies, which must include six semester hours of American history, and work in Conservation of Natural Resources.

Post Graduate Certificate--Secondary

College credit required--master's degree from a standard institution.

Geography required--same as for Graduate Certificate--Secondary.

Major field credit required--same as for Graduate Certificate--Secondary.

Georgia

Professional Elementary Certificate

College credit required--four years of planned professional curriculum approved in advance by the State Board of Education, including a bachelor's degree.

Geography required--three semester hours of Conservation of Natural Resources which may be taught by Science Department or Geography Department. In addition, ten semester hours of technical and specialized subjects must be chosen from the following: English, science, or social studies. Geography may be taken in fulfillment of social studies.

Professional Secondary Certificate

College credit required--four years of professional curriculum approved in advance by the State Board of Education, including a bachelor's degree.

Geography required--twenty semester hours may be chosen from geography, economics, sociology, or political science.

Major field credit required--thirty-three and one-third semester hours of social studies of which thirteen and one-third must be in history and the remainder chosen from geography, economics, sociology, or political science.

KentuckyProvisional Elementary Certificate

College credit required--a bachelor's degree.

Geography required--Conservation of Natural Resources required, but does not have to be taught by geography department. In addition, nine semester hours must be selected from economics, history, government, or geography.

Standard Elementary Certificate

College credit required--completion of a four-year curriculum for the education of elementary teachers plus the requirements for the master's degree in a standard graduate school.

Geography required--same as for the Provisional Elementary Certificate.

Provisional High School Certificate

College credit required--a bachelor's degree.

Geography required--a minimum of six semester hours in geography.

Major field credit required--a minimum of forty-eight semester hours, including eighteen semester hours in history, six semester hours in American history and six semester hours in European history and a minimum of six semester hours in each of the following subjects: political science, economics, sociology, and geography.

Standard High School Certificate

College credit required--completion of a four-year curriculum for the education of high school teachers plus the requirements for the master's degree in a standard graduate school.

Geography required--same as for the Provisional High School Certificate.

Major field credit required--same as for the Provisional High School Certificate.

LouisianaElementary Certificate

College credit required--bachelor's degree consisting of a

minimum of 124 semester hours based upon an approved teacher education curriculum.

Geography required--three semester hours of General Geography. Three semester hours of Louisiana history and/or Louisiana geography required for upper elementary teachers.

High School Certificate

College credit required--bachelor's degree consisting of a minimum of 124 semester hours based upon an approved teacher education curriculum.

Geography required--a minimum of twelve semester hours, including at least three and not more than six semester hours in United States history, political science, and survey of social sciences.

Major field credit required--in addition to general education requirements listed above, a minimum of twelve semester hours, including three semester hours in government is required.

Mississippi

Class A Elementary Certificate

College credit required--bachelor's degree from an approved teacher education institution which shall include the requirements in general education, professional education, and specialized education.

Geography required--three semester hours of social science for children including Conservation of Natural Resources. This is not required to be taught by the geography department. In addition, six semester hours must be presented in one or more of the following fields: geography, political science, sociology, economics, philosophy, religion, or psychology.

Class AA Elementary Certificate

College credit required--bachelor's degree from an approved teacher education institution plus thirty semester hours of appropriate graduate study in courses that are acceptable toward an advanced degree, with two years of successful teaching experience.

Geography required--same as for Class A Elementary Certificate.

Class A Secondary Certificate

College credit required--bachelor's degree from an institution approved for teacher education.

Geography required--as general education, six semester hours in one or more of the following fields: geography, political science, sociology, economics, philosophy, religion, or psychology.

Major field credit required--a minimum of twenty-four semester hours, including six semester hours in World history and six semester hours in American history. Six of the remaining twelve semester hours must be selected from political science, geography, sociology, or economics.

Class AA Secondary Certificate

College credit required--a bachelor's degree from an institution approved for teacher education plus thirty semester hours of appropriate graduate study in courses that are acceptable toward an advanced degree.

Geography required--same as for Class A Secondary Certificate.

Major field credit required--same as for Class A Secondary Certificate.

North Carolina

Class A Certificate For Grammar Grade or Primary Certificate

College credit required--a bachelor's degree from a standard four-year college.

Geography required--six semester hours of geography including Principles and Regional.

High School Teacher's Certificate

College credit required--a bachelor's degree from a standard four-year college.

Geography required--thirty semester hours of social studies of which twelve semester hours will be selected from government, geography, economics, or sociology.

Major field credit required--thirty semester hours consisting of six semester hours of American history, six semester hours of European or World history, twelve semesters hours from government, geography, economics, or sociology, and six semester hours of electives from any of the above.

South Carolina

There are four groups of certificates based upon in-service education and experience. The groups are subdivided into five classes as determined entirely by the amount and kind of education, but each group does not contain all of the classes. The classes are further subdivided into grades which are based upon scores made on the National Teachers Examination.

Group One--Probationary Certificates

Class One

College credit required--completion of the prescribed four-year program of general and professional education plus a master's degree in education or a master's degree with a major in education and a minor in the subject or area of the certificate, or vice versa.

Geography required--twelve semester hours of social studies which must cover at least three fields. Growth and Development of South Carolina is required of all elementary students. Included in this course is an understanding and appreciation of the human and natural resources of the state, emphasizing the possibilities of resource use for future growth. This does not have to be taught by the geography department.

Class Three

College credit required--satisfactory completion in an approved institution of the prescribed four-year program of a general and professional education, including a bachelor's degree.

Geography required--same as for Group One Class One Certificate.

Group Two--Intermediate Professional Certificates

Class One

All of the requirements are the same as for Group One Class One except for the two years of experience required for this classification.

Class Two

College credit required--completion of the prescribed four-year program of general and professional education plus a minimum of eighteen semester hours of graduate credit in general, professional, or special education. This eighteen semester hours must include three semester hours in professional education.

Geography required--same as for Group One Class One.

Class Three

College credit required--completion of the prescribed four-year program of general and professional education plus six semester hours of college credit in general or professional education.

Geography required--same as for Group One Class One.

Group Three--Advanced Professional Certificates

Class One--Advanced

College credit required--an earned doctor's degree with a major or minor in professional education or an earned doctor's degree in education.

Geography required--same as for Group One Class One.

Class One

College credit required--completion of the prescribed four-year program of general and professional education plus a master's degree in education or a master's degree with a major in education and a minor in the subject or area of the certificate or vice versa. Graduate credit of at least six semester hours must have been earned within five years of the date of application.

Geography required--same as for Group One Class One.

Class Two

College credit required--completion of the prescribed four-year program of general and professional education plus a minimum of eighteen semester hours of graduate credit in general, professional, or special education. This eighteen semester hours must include a minimum of three semester hours in professional education. Graduate credit of at least six semester hours must have been earned within five years of the date of application.

Geography required--same as for Group One Class One.

Class Three

College credit required--completion of the prescribed four-year program of general and professional education plus six semester hours of college credit earned within seven years of the date of application.

Geography required--same as for Group One Class One.

Secondary Certificates

The requirements for the elementary certificates, listed above, as pertains to college credit required are also the requirements for secondary certificates of equivalent Group, Class, and Grade. In addition to the college requirements the following prerequisites are also required for Secondary Social Studies majors:

Geography required--South Carolina--Its Growth and Development. This course may be taught by departments other than geography, as well as geography. Twelve semester hours divided among at least two fields will be selected from the following: government, economics, geography, or sociology.

Major field credit required--thirty semester hours consisting of at least six semester hours in United States history, six semester hours in European history, twelve semester hours from at least two of the following fields: government, economics, geography, or sociology. Six semester hours of electives will be taken from government, economics, geography, sociology, or history.

Tennessee

Teachers Provisional Elementary Certificate--Grades 1-9

College credit required--completion of an approved program of teacher education leading to a bachelor's degree.

Geography required--twelve semester hours in social studies, of which four semester hours must include study in the areas of Tennessee history, civics, and geography. Geography may be included in the remaining eight semester hours. Three semester hours of Conservation of Natural Resources are required. This subject may be taught by geography department or natural science department.

Teachers Standard Elementary Certificate--Grades 1-9

College credit required--in addition to the requirements for the Provisional Elementary Certificate, three years of teaching experience, within the last five years, must be presented.

Teachers Advanced Certificate--Grades 1-9

College credit required--an earned master's degree in an approved program leading toward public school teaching and resulting in additional endorsement or further work in fields presently endorsed is required.

Geography required--same as for the Provisional Elementary Certificate.

Teachers Provisional Certificate--Grades 7-12

College credit required--completion of an approved program of teacher education leading to a bachelor's degree.

Geography required--six semester hours of geography.

Major field credit required--a minimum of thirty-six semester hours of social studies are required, distributed as follows: six semester hours of American history, six semester hours of European or World history, six semester hours of sociology, six semester hours of geography, six semester hours of economics, and six semester hours of government.

Teachers Standard Certificate--Grades 7-12

All requirements are the same as for the Teachers Provisional Certificate with the additional requirement of three years of teaching experience within the last five years.

Teachers Advanced Certificate--Grades 7-12

College credit required--an earned master's degree in an approved program leading toward public school teaching and resulting in additional endorsement or further work in fields presently endorsed is required.

Geography required--same as for the Teachers Provisional Certificate.

Major field credit required--same as for the Teachers Provisional Certificate.

Texas

Permanent Elementary Certificate

College credit required--completion of prescribed two-year schedule of studies in a Texas State Teachers College.

Geography required--none.

Permanent High School Certificate

College credit required--bachelor's degree (120 semester hours) which must include six semester hours in English and twenty-four semester hours in Education, of which eight must be in secondary

education and practice.

Geography required--none.

Major field credit required--not specified in certification regulations.

Virginia

College Professional Certificate (Elementary)

College credit required--bachelor's degree.

Geography required--none.

Post Graduate Professional Certificate (Elementary)

College credit required--master's degree or doctor's degree from an accredited institution.

Geography required--none.

College Professional Certificate (High School)

College credit required--bachelor's degree.

Geography required--not less than three courses chosen from the following: government, economics, geography, sociology, introduction to social studies, international relations.

Major field credit required--endorsement "Social Studies not including History" eighteen semester hours in not less than three courses from the following: government, economics, geography, sociology, introduction to social studies, international relations. "Social Studies including History"--twelve semester hours in history and twelve semester hours taken from the list in the preceding paragraph.

Post Graduate Professional Certificate (High School)

College credit required--a master's degree or a doctor's degree from an accredited institution.

Geography required--same as for the College Professional Certificate.

Major field credit required--same as for the College Professional Certificate (High School).

Summary

Twelve prominent geographers served as members of a jury to criticize the "Outline of a Proposed Course in Geography for Public School Teachers." Of 586 items in the outline, 552 of the items were considered indispensable in an introductory course in geography for teachers. Three or more of the jurors felt that thirty-two of the items were desirable and two of the items were unnecessary for such a course in geography.

The majority of the jury members believed that an introductory course in geography should be taught as principles of geography in which are emphasized the natural features of the world and the way that man has utilized these basic resources in building and obtaining the necessities of life.

Although prominent geographers have agreed that one course in introductory geography is the minimum to include in the teacher education program of elementary and secondary social studies teachers, only two southern states required such a course in geography. Three additional states required geography but did not specify an introductory course, and five states permitted geography to be selected from a group of social studies. One state did not require geography of elementary or secondary teachers.

CHAPTER IV

THE ANALYSIS OF DATA

In this chapter, the revised outlines and questionnaires that were returned from sixty-three persons in charge of teaching geography to prospective teachers in eleven southern states are analyzed. These returns represented 79 per cent of the total enrollment of the seventy-nine colleges and universities that had been sent outlines and questionnaires. One of the questionnaires received was incomplete and could not be used in the tabulations.

The questionnaires¹ sent to the seventy-nine colleges and universities consisted of four main sections, namely: (I) General Information, (II) Types of Programs Offered, (III) Organization, and (IV) Questions Pertaining to the Enclosed Outline. The discussion of the examination of the data taken from the questionnaires and outlines will be presented in accordance with the above arrangement of the four topics.

General Information

In size the institutions varied from 235 students in the smallest college (Table 6) to 11,000 students in the two largest universities. The average enrollment for all institutions was 2,500 students.

¹See Appendix E.

TABLE 6

ENROLLMENTS OF SIXTY-THREE HIGHER INSTITUTIONS
IN ELEVEN SOUTHERN STATES

Range of Enrollments	Frequency
Under 250	1
250 - 499	9
500 - 999	16
1000-1999	13
2000-2999	8
3000-7499	10
7500 and over	6
Total	63

Types of Programs Offered

The courses that were taught in the sixty-three participating colleges and universities were classified by the writer under nine titles as follows: (1) principles of geography, (2) elements of geography, (3) general geography, (4) human geography, (5) economic geography, (6) conservation of natural resources, (7) regional geography, (8) world geography, and (9) special and miscellaneous courses. In turn all of these courses could be grouped under systematic or regional geography. Using these two categories, principles, elements, general, economic, and human geography, and conservation of natural resources were included under systematic geography. Regional geography embraced the courses entitled regional geography, world geography, and most of the special courses which were of a regional nature covering a

small area, such as the state of Louisiana or the state of Tennessee. It was necessary, however, to study more than the mere names of the courses since as many as six different names were used for one geography course, yet all of the six courses used the same textbook. In a few cases the names of the courses bore little or no relationship to the content of the textbook.

Systematic or topical geography was required in more colleges and universities than was regional geography. In the sixty-three institutions included in this study, fifty-seven courses were taught as principles or elements courses, fourteen as human geography, eighteen as economic geography, and fourteen were conservation of natural resources. Thus, a total of 102 required courses (Table 7) in geography were taught as systematic or topical geography. Forty-five courses, required of either prospective elementary teachers or secondary social studies teachers, were taught as general regional geography, world geography, or geography of a particular region.

The average number of semester hours in geography required by all institutions was three and seven-tenths. This was seven-tenths of a semester hour more than that assumed by the writer at the outset of the study. However, this study, as previously stated, included only those institutions that required geography in the teacher education programs. For elementary teachers, the average number of semester hours required in geography was four and nine-tenths, while the prospective secondary social studies teachers were required to take an average of only two and one-half semester hours. When these requirements were classified into private and public institutions, it was

TABLE 7

DISTRIBUTION OF REQUIRED COURSES IN GEOGRAPHY IN SIXTY-THREE
HIGHER INSTITUTIONS IN ELEVEN SOUTHERN STATES

Name of Course	Public Institutions		Private Institutions	
	Courses Required of			
	Elementary Teachers	Secondary Teachers	Elementary Teachers	Secondary Teachers
Elements of Geography	18	3	1	1
Principles of Geography	13	5	6	2
General Geography	3	3	2	0
Human Geography	6	0	4	4
Economic Geography	5	2	5	6
Conservation of Natural Resources	5	3	3	3
Regional Geography	4	1	4	2
World Geography	9	7	3	2
Miscellaneous*	9	2	1	1

*Most of these courses were of a regional nature covering a specific area.

found that the private colleges and universities required three and eight-tenths semester hours and two and six-tenths semester hours of their elementary and secondary teachers, respectively, and the public institutions required five and six-tenths and two and four-tenths semester hours respectively.

From a comparison of the required number of semester hours in geography, it was found that the private colleges and universities had

requirements more nearly alike for the elementary and the secondary programs than did the public institutions. This, in the writer's opinion, resulted from the desire of the various administrations to utilize faculty members as much as possible. By requiring both elementary and secondary teachers to take the same courses in geography, enough students could be obtained to justify teaching courses that were required of or recommended for state certification.

Organization

Some individual or agency must determine what courses in geography are to be required of prospective teachers, and these in turn have to be implemented by subordinates. In this section it will be determined who is responsible for setting up the requirements in geography for prospective teachers and to find out how these requirements are carried out.

At the University of Florida, prospective elementary or secondary teachers must take six semester hours of comprehensive courses known as C-2, the physical sciences. These two courses are classified as general education courses and carry no geography titles or numbers. The first half of the six semester hours is devoted to a survey of the physical sciences, of which approximately one-half or roughly one and one-half semester hours are devoted to physical geography. In the second semester, the students are given the opportunity to select one three semester hour course from astronomy, physics, or physiography. Approximately 50 to 60 per cent of the students select physiography, with about 80 to 90 per cent of the prospective teachers making this

choice. Thus, the average student in the teacher education program at the University of Florida has taken approximately four and one-half semester hours of geography before selecting any courses that are specifically classified as geography.

To determine if similar situations existed in other colleges and universities in the south, the question was asked, "Is any geography included as general education in your teacher education program?" The data obtained from the answers to this question gave indications that in many of the colleges and universities, especially the small liberal arts colleges, the definition of general education is not well understood. To make sure that this question would not be misinterpreted, the writer included a second question, "Is the basic geography that is required a general college requirement or is it a requirement provided especially for elementary teachers and secondary social studies teachers?" It was found that twelve colleges and universities required geography in the fulfillment of requirements in general education. In most of these institutions the general education requirements were satisfied by taking regularly taught geography courses, while in four institutions the geography subject matter was integrated into the required general education courses. Only two private colleges out of twenty-four required geography as part of general education. This represents eight per cent of the private institutions compared to 25 per cent of the public colleges and universities.

Three institutions stated that geography was not specifically required for teachers nor was it a general education requirement. In spite of this, geography courses were listed as required for either

elementary or secondary teachers. With the exception of those institutions where geography was a general education requirement and the three colleges and universities that did not specifically require geography of prospective teachers, all of the other teacher education institutions offered geography as a course specifically for prospective teachers.

In response to the question, "Do you offer a special course in methods of teaching geography?", six geography instructors replied in the affirmative. Five of the institutions, or 13 per cent, that offered a course in methods were public institutions, and one, or 4 per cent, was a private college. Table 8 shows that the private institutions provided some methods of teaching in 54 per cent of their introductory courses compared to 53 per cent in the public institutions.

TABLE 8

DISTRIBUTION OF COURSES IN METHODS OF TEACHING GEOGRAPHY AND
METHODOLOGY INCLUDED IN INTRODUCTORY GEOGRAPHY COURSES
IN SIXTY-THREE HIGHER INSTITUTIONS
IN ELEVEN SOUTHERN STATES

Type of Institution	Institutions Providing			
	Course in Methods of Teaching Geography		Methodology in Introductory Geography Course	
	Number	Per Cent	Number	Per Cent
Public*	5	13	20	53
Private	1	4	13	54

*One public institution did not answer these questions.

The widespread use of supplementary material was borne out (Table 9) by the fact that only three of the colleges and universities, two private and one public, did not use supplementary material in the teaching of the introductory courses in geography. The remainder of the institutions used different materials, varying from slides and movies to the more formal study of rocks, minerals, and models in a laboratory period. Strip films, slides, and motion pictures were the most popular media used in geography classes; and maps, globes, charts, field trips, and the laboratory period also proved to be popular.

TABLE 9

DISTRIBUTION OF SUPPLEMENTAL MATERIALS USED IN THE INTRODUCTORY
GEOGRAPHY COURSES IN SIXTY-THREE HIGHER INSTITUTIONS
IN ELEVEN SOUTHERN STATES

Type of Institution	Number of Institutions Using*			
	Maps, Globes, and Charts	Films, Slides, and Film Strips	Field Laboratory Trips	Equipment
Public	30	35	19	18
Private	16	17	9	3

*Three institutions did not answer this question. Most institutions used more than one type of supplemental material.

The question, "What agencies formulate the requirements as to the course(s) that prospective teachers must take?", was included in the questionnaire to determine how much influence the state certification had upon the programs offered in higher institutions. The premise was made by the writer, at the outset of the study, that state certification requirements, to a large extent, determine the courses

that colleges teach to prospective teachers. In sixteen colleges the geography courses were formulated by the respective state departments of education of the states in which the colleges were located. Seventeen additional institutions required that geography be taught to prospective teachers as a result of collaboration between the state department of education and the faculty or administration of the college. State departments of education had some influence on the geography programs for prospective teachers in thirty-three colleges, or 57 per cent, of the institutions answering this question. Twenty-five, or 43 per cent, required geography in the teacher education curriculum because of local administration or faculty policy.

TABLE 10

AGENCIES FORMULATING REQUIREMENTS IN GEOGRAPHY FOR PROSPECTIVE
TEACHERS IN SIXTY-THREE HIGHER INSTITUTIONS
IN ELEVEN SOUTHERN STATES

Type of Institution	Institutions* Requiring Courses in Geography Because of					
	State Department of Education Directive		Collaboration Between State Dept. of Ed. and Local Administration		College Administrative Policy	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Public	9	23	12	31	16	41
Private	7	29	5	20	9	38

*Two public, or five per cent, and three private institutions, or 13 per cent, did not answer this question.

The data must be further analyzed to get the full significance. In the state of Texas geography is neither required nor recommended for the certification of either elementary or secondary social studies teachers. All of the eight institutions from Texas included in this study were state colleges, the majority of them teachers colleges or former teachers colleges.

Of the many private colleges and universities in the state of Texas, none of the four which met the criteria set up for this study were willing to take part. Although all of the eight participating state colleges from Texas required geography none required it because of the state department of education, while three required geography courses because of administration policy of the individual college. A similar situation was prevalent in the state of Virginia. Only two colleges, both Negro, in this state met the criteria and were willing to take part in the study. Four colleges were willing to take part, but they did not offer any geography in their curricula. Virginia, as Texas, does not require nor recommend geography in the teacher education programs for elementary teachers. The subject may be included in a social studies major for prospective secondary teacher; however, its inclusion is not emphasized.

The next question that arose was who worked out the content of the required geography courses. The instructor of the particular course worked out the content in twenty-six institutions, the geography staff in thirteen colleges, and the education department in five colleges and universities. The remainder of the institutions delegated the responsibility to the various departments that taught geography.

Many of the smaller colleges, which did not have geography departments, included geography in the sociology, economics, history, or social science departments. In seven colleges (Table 11) the education department worked in conjunction with the geography departments in determining the material to be included in the required geography courses.

TABLE 11

PERSONS AND DEPARTMENTS RESPONSIBLE FOR WORKING OUT CONTENT OF
REQUIRED GEOGRAPHY COURSES IN SIXTY-THREE HIGHER
INSTITUTIONS IN ELEVEN SOUTHERN STATES*

Type of Institution	Instructor of Course		Geography Department		Education Department		Other Dep'ts.		Geography and Ed. Departments	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Public	14	36	13	33	4	10	2	5	5	13
Private	12	50	0	0	2	8	4	17	2	8

*One public institution, or three per cent, and four private colleges and universities, or 17 per cent, did not answer this question.

The individual or the department responsible for working out the content of the required geography courses was not always the same as the one to whom the supervision of the course was delegated. This was evident from the data obtained from the question that requested the individual filling out the questionnaire to check the department which supervised the courses in geography. Twenty-four institutions, of which twenty-one were public, delegated the supervision of geography to the geography department. In many of the colleges, where there was no geography department, geography was supervised by the social science

division or department. This was true (Table 12) in ten public and eight private institutions. The education department supervised geography in two public and four private colleges and universities, and shared this responsibility with the geography department in three additional colleges.

To supplement the explanation of the organization of the geography programs in the participating colleges and universities, two questions were included: (1) "Are any prerequisites required of students taking the basic course in geography?" and (2) "Are you satisfied with the geographic education prospective teachers have received upon completion of your program? If not, what changes would you make in your geography program for the education of elementary teachers and secondary social studies teachers?"

TABLE 12

DISTRIBUTION OF SUPERVISORS OF REQUIRED GEOGRAPHY
COURSES IN SIXTY-THREE HIGHER INSTITUTIONS IN
ELEVEN SOUTHERN STATES*

Type of Institution	Geography Department		Education Department		Geography and Ed. Departments		Social Science Department		Other Depts.	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Public	21	54	2	5	2	5	10	26	4	10
Private	3	13	4	17	1	4	8	33	6	25

*Two private institutions, representing eight per cent, did not answer this question.

Only six institutions stated that prerequisites were necessary for admittance to the introductory course in geography. In three of these colleges the only prerequisite was sophomore or junior classification, while in two other colleges a required general education course had to be taken previous to enrolling for the introductory course. One private college required a basic test for freshmen students in which those students making unsatisfactory grades were required to take a geography course without credit. In the remaining fifty-seven colleges and universities, the basic geography course was open without restrictions to all students.

The writer wished to ascertain what kind of a program an instructor would desire if he were free to set up the requirements. Twelve instructors were satisfied with the geography programs at their institutions. Of this number, eight were from private colleges and four were representatives from public colleges and universities. Two additional faculty members from public institutions were satisfied with the programs for elementary teachers but not with the programs for secondary teachers. Four of the instructors from the public colleges, which were satisfied or partly satisfied, had broad programs in geography. However, several of the private institutions which were satisfied with their programs had but one or two courses in geography--the basic minimum to meet state certification requirements.

In the majority of these latter institutions geography was not supervised by the geography department nor taught by geography instructors. It was expected, however, that instructors who specialized in geography or who taught in institutions having strong geography

departments would feel that more geography was necessary than would those who were not geography specialists. This study revealed that the geography instructors and the departments determine, in no small part, the geography offerings and requirements at many institutions.

The following comments were taken from some of the questionnaires concerning changes various instructors would make in the geography program at their respective institutions:

Need a course in principles of geography. Also need to double the number of hours required in geography.

Secondary teachers should have six semester hours of geography. These courses should be Conservation of Natural Resources, World Geography, and the Teaching of Geography.

Should like to see geography as part of general education for all teachers.

Should be required to take a course in Geography of North America and a world survey course.

Simplify it--it is far too technical and complex now. Don't start with lectures on geographical ignorance.

Lacks broader scope, greater depth, better integration with elementary and high school needs.

These comments were typical of those made concerning the programs. Many of the instructors echoed the same complaint, that too little geography was being required of teachers. However, one instructor from a public college, formerly a state teachers college, felt that too many individual requirements for teachers were already in the teacher education program.

Questions Pertaining to the Proposed Outline

As a basis for analyzing the programs in the participating colleges and universities, the Outline of a Proposed Course in

Geography for Public School Teachers was compared with the introductory courses offered in the sixty-three institutions. This was accomplished by having each geography instructor supply the title and author of the textbook used, if the text was closely followed and finished, or by having the geography instructor check the outline sent to him by the writer.

Thirty-six textbooks were used in 147 required courses in geography.² Of this number, twenty-seven were used in the introductory courses at the sixty-three colleges and universities, and sixteen of these were used by only one institution each.³ The majority of the courses taught used eleven textbooks as guides for the courses. Six of the textbooks were used by four or more institutions. All of these texts were written according to systematic geography and/or climatic regional geography. The four texts that are most widely known today as exponents of regional geography written according to political or cultural regions were used by seven colleges and universities.⁴

The text is important in many geography courses because it determines what will be taught and how the material will be arranged. Forty-two institutions followed the arrangement of the textbook used in the course, and thirty-three of these colleges and universities finished the entire text.

²See Appendix G, text numbers 1 through 36.

³See Appendix G, text numbers 1 through 27.

⁴See Appendix G, text numbers 12, 15, 20, and 24.

In reply to the question concerning the type of organization in the introductory course, twenty-nine instructors responded that they taught the introductory course according to topical arrangement, eighteen as regional geography, and twelve as a combination of systematic and regional, similar to that followed by the writer in the proposed outline. Answers varied as to the reasons for using topical or regional arrangement. Several stated that the textbook was written in the topical manner, so they followed the text. Other reasons given were:

Topical arrangement is best adapted to acquiring an understanding of the world wide factors involved. The "Master Plan of Geographic Principles."

Students do not have the background to grasp regional pictures.

Introductory survey course is designed to provide a general concept of geography, and background that is not limited to one part of the world.

Find it more effective in the teaching situation.

Want pupils to think geographically. Use principles-- later apply countries.

Among the reasons given by instructors in favor of regional arrangement were:

Climatic regional approach gives an outline of a plan. Other material can be arranged around the central outline.

World regional arrangement affords an opportunity to concentrate on the world as a whole. Relationships of one's own region with others. It is a broad interpretation that interests geographic facts.

Regional geography is used in the best text we can find.

Logical way of studying the world.

Students seem to grasp more readily the interrelatedness of man.

In comparing the data obtained from the outlines and questionnaires that were returned from the participating institutions, it was found that twenty-one of the geography instructors checked the items on the Outline of a Proposed Course in Geography for Public School Teachers. Fifteen additional instructors each indicated on the questionnaire what topics in the outline were not included in his introductory course or what items in his course were not covered in the questionnaire. Since twenty-seven geography instructors followed the arrangement of their respective adopted textbooks and completed the texts, they did not check the outline or specify how their introductory courses compared with the outline.

The data further revealed that nine colleges and universities, of which eight were public, offered introductory courses at their respective institutions which were very similar, if not identical, to that proposed by the writer. An additional ten institutions followed the outline except for the omission of Chapters 3 and 16. One other college followed the proposed outline except for Chapter 16, which the instructor omitted. Table 13 shows a list of the textbooks used and includes the nineteen institutions that followed or closely followed the writer's outline.

In seven institutions the basic course was not of an introductory nature but rather a specialized course. Three of these colleges offered Economic Geography as the required course, three Conservation of Natural Resources, and one Political Geography. These courses usually assume some knowledge of basic geography on the part of the students.

TABLE 13

TEXTBOOKS USED IN INTRODUCTORY GEOGRAPHY COURSES IN SIXTY-THREE
HIGHER INSTITUTIONS IN ELEVEN SOUTHERN STATES

Name of Text	Type of Insti- tution	Number of Institutions Using Texts*			
		Did Not Follow Arrange- ment of or Finish	Followed Arrange- ment; Did Not Finish	Finished; Did Not Follow Arrange- ment	Followed Arrange- ment and Finished
World Geography	Public	0	0	1	1
	Private	0	0	0	2
Elements of Geography	Public	3	2	2	2
	Private	0	0	0	0
The Earth and Its Resources	Public	0	1	0	1
	Private	0	0	1	0
Essentials of Geography	Public	0	2	0	2
	Private	0	1	1	1
World Regional Geography	Public	0	0	0	3
	Private	0	0	0	1
A Geography of Man	Public	1	0	0	1
	Private	0	0	0	0
Introduction to Geography	Public	2	1	0	2
	Private	0	0	0	0
Cultural Worlds	Public	1	0	0	0
	Private	1	0	0	0
Elements of World Geography	Public	1	0	0	1
	Private	0	0	0	0
Regional Geogra- phy of the World	Public	0	0	0	1
	Private	0	0	0	1
Human Geography	Public	0	1	0	1
	Private	0	1	1	0
Miscellaneous	Public	4	0	0	2
	Private	3	2	1	6
Totals		16	11	7	28

*One institution did not use any text in the introductory course.

The newest textbook using political regions as a basis for introductory geography was written by Wheeler, Kostabade, and Thoman.⁵ This text, like a similar but older book by Lackey and Anderson,⁶ divided the world into political regions and discussed the geographical aspects of these regions. Preston James' text and Russell and Kniffen's book are similar to the political regional geography texts, except that they group political areas of similar cultures together and treat them as areas known as cultural regions. Seven institutions offered introductory geography courses based upon political or cultural regions.

The outline proposed by the writer, in a large part, is similar to the texts shown in Table 13, excluding those based upon political and cultural regions.⁷ Some texts explain the topics from a climatic standpoint while others emphasize more of the human element. In spite of these slight differences in approach, the material covered and the end results are very much alike. Thus, in comparing the writer's outline with the courses taught in those institutions not already discussed, the approach taken and the material covered would show a much greater degree of similarity than it would difference. It is safe to say that, excluding the seven institutions teaching conservation of natural resources and economic geography, and the seven colleges and universities stressing political and cultural regional geography, the

⁵See Appendix G, text number 24.

⁶See Appendix G, text number 15.

⁷See Appendix G, text numbers 12, 15, 20, and 24.

remainder of the institutions offer an introductory course similar to or like the introductory course proposed by the writer.

The following suggestions were made by the various geography instructors when asked, "What topics should be added to the proposed outline?"

Need for increasing the food supply for the increasing population.

Go more heavily into various occupation forms and systems. Also include ethnic composition, cultural density, and primary settlement pattern.

Have an overall study of natural and human resources.

Add more wise use of natural and human resources.

Discussion of relationship of food, food requirements, diets, and standards of living.

These comments were a sample of those listed, but the general trend of the comments was to stress more of the human aspects, especially those that pertained to obtaining food for an ever-increasing population.

The last question asked of the instructors was a very controversial one, "Do you think that a special course in geography should be given for prospective teachers?" Many instructors seemed to feel that any mention of a special course for teachers implied a watered-down version of subject matter. This idea was not the writer's point of view. The author felt that prospective teachers have special needs that should be met. Putting prospective teachers in a class with other students, whose interests and goals are radically different, would result in the prospective teachers finishing the course still lacking

some of the fundamentals that they should have obtained. Many did not share this point of view as can be gathered from the following comments:

The education department should inform prospective teachers of methods and sources of ideas, the geography people will supply the material.

Geography for teachers is not different than geography in any other curriculum.

If a course is good enough for general purposes and well taught, it is good enough for teachers.

They should know geography just as anyone else. Let them get their methods by observing good methods employed by the instructor.

If geography is education for world citizenship, everyone needs basic geography.

However, the comments opposing a special course in geography for teachers were not as numerous as those in favor of a special course. Twenty-one public and sixteen private institutions favored a special course in geography for teachers compared to seventeen public and five private colleges and universities which were opposed to such a course. Four instructors did not answer this question. Some of the reasons given for a special course for prospective teachers were:

Teachers must be grounded in economic geography and world physical geography.

With only six semester hours of geography required, the prospective teacher needs definite work on the meaning, necessary subject matter, and organization of regional work.

Regular courses in geography are planned for specialists. Prefer types of courses which take up geography of physical or political regions one at a time.

It should aim at presenting geographic concepts in such a manner that while acquiring subject matter, prospective

teachers can effectively relate it to the problem of getting across the immature understanding of the child.

Summary

1. Enrollments of the institutions in the study ranged from 235 students to 11,000 students, with an average of 2,500.
2. Of the 147 required courses in geography taught, 102 were taught as topical courses and forty-five as regional.
3. The average number of semester hours in geography required in all institutions was three and seven-tenths, four and nine-tenths for elementary teachers and two and one-half for secondary social studies teachers.
4. Twelve institutions required geography in the general education program, which was fulfilled by taking regularly taught geography courses in eight colleges and universities and by taking integrated courses in general education in the other four institutions.
5. Only six colleges and universities offered courses in methods of teaching geography, however, thirty-three institutions included some methods in their introductory course, when taken by prospective teachers.
6. Supplemental material was used by fifty-nine colleges and universities. Films, film strips, and slides were the most popular, being used in fifty-two institutions, followed by maps, charts, globes, field trips, and laboratory equipment.
7. The state departments of education influenced, to some degree, the geography taught in thirty-three colleges and universities, or 57 per cent of the participating institutions.

8. The content of the introductory geography courses was worked out by the instructors in twenty-six insitutions, followed by the geography departments in thirteen colleges and universities, the education department in five others, and a combination of the education and geography departments in seven institutions.

9. Geography was supervised by the geography department in twenty-four institutions, the social science department in eighteen, the education department in six, and shared by the education and geography departments in three.

10. Prerequisites for the introductory geography course were required in only six institutions. In three the prerequisite was a sophomore or junior classification, in one a proficiency test, and in two others courses in general education.

11. Eight private colleges and universities were satisfied with the geography programs they offered to prospective teachers. Four public institutions were satisfied with their entire programs for teachers and two additional colleges were only satisfied with their elementary program.

12. Sixty-one colleges and universities used twenty-seven different texts for the introductory course in geography. Six of these texts were used by four or more institutions, and fourteen were used in only one institution each.

13. The writer's outline used systematic geography in Part I and climatic regional geography in Part II. Nine colleges and universities followed this approach in their introductory courses. Ten other colleges and universities omitted Chapters 3 and 16, and one

public university did not include Chapter 16.

14. Thirty-six institutions provided introductory courses similar to the writer's outline, but varying in arrangement of material and emphasis.

15. Seven colleges and universities offered Economic Geography, Conservation of Natural Resources, or Political Geography as introductory courses.

CHAPTER V

COMPARISON OF THE PROGRAMS DESIGNED FOR THE PREPARATION OF PROSPECTIVE ELEMENTARY AND SECONDARY TEACHERS IN ELEVEN SOUTHERN STATES

The similarities and differences of the geographical programs for the preparation of elementary teachers and secondary social studies teachers in eleven southern states are compared in this chapter.

Characteristics of Elementary Programs

Each of the sixty-three participating institutions in this study offered programs for the education of prospective elementary teachers, and in all but one institution geography was among the required subjects. These programs varied in length from two years in Texas, Kentucky, and Tennessee to four years in the eight other states, and in content from no semester hours in Texas to six semester hours in North Carolina. Except for the state of Texas, all states covered by the Southern Association required four years of college preparation for the standard elementary certificate. This does not mean, however, that elementary teachers are not employed if they do not possess a baccalaureate degree. When there is a shortage of qualified elementary teachers, as at present, persons with lesser formal college education may be employed in areas where no fully qualified teachers are available. The present trend, however, is to raise the standards for state certification, but this takes time since new requirements are usually

not made retroactive for personnel already employed.

The state of Mississippi raised the certification requirements for elementary teachers, so that after December 1, 1954 no new teacher could obtain a teaching certificate with less than two years of college work. This requirement will be raised to four years of college preparation effective December 1, 1956. Thus only three of the southern states in this study, Kentucky, Tennessee, and Texas¹ will have regular certificates, not emergency or limited certificates, issued on the basis of less than four years of college work. This compares favorably with the rest of the United States, as eighteen states issue elementary certificates based upon less than four years of college preparation.

All of the selected southern states, except Texas and Virginia, required or recommended geography in the teacher education program for elementary teachers. Five of the states required some conservation of natural resources as part of the elementary program. Although geographers usually consider this subject as part of their field, these states did not specify the department in which the subject had to be taught. As a result, Conservation of Natural Resources was offered by the geography department in only eight colleges and universities in the five states requiring the subject in the elementary program (Table 14).

In the states of Louisiana and North Carolina specific courses in geography were required or were strongly recommended by the state departments of education. Louisiana required three semester hours of General

¹In the near future Texas will require four years of college work for the Standard Elementary Certificate.

TABLE 14

FULFILLMENT OF CERTIFICATION REQUIREMENTS IN CONSERVATION OF
NATURAL RESOURCES IN FIVE SOUTHERN STATES

State	Total Number of Insti- tutions	Conservation Taught By			
		Geography Department		Other Departments	
		Number	Per Cent	Number	Per Cent
Florida	6	6	100	0	0
Georgia	5	1	20	4	80
Kentucky	11	0	0	11	100
Mississippi	3	0	0	3	100
Tennessee	7	1	14	6	86
Total	32	8		24	

Geography and North Carolina three of Principles of Geography and three of Regional Geography. The requirements for the General Geography course could be met by any good course in principles, elements, or introductory geography. The same is true for the principles course required in North Carolina. Regional Geography could be taught as a general regional course based upon political, cultural, or climatic regions or as geography of a specific region, such as North America or South America. Table 15 shows how the fourteen institutions in Louisiana and North Carolina fulfilled the elementary education requirements in geography.

In six states, geography may be selected from among three or more fields of social studies, namely: history, economics, political

TABLE 15

PROGRAMS IN GEOGRAPHY OFFERED TO FULFILL CERTIFICATION REQUIREMENTS
FOR ELEMENTARY TEACHERS IN LOUISIANA AND NORTH CAROLINA

Name of Course	Number of Institutions Offering Intro- ductory Geography Courses and the Text- books Used in the Courses in			
	Louisiana		North Carolina	
	Number of Institutions	Textbook* Numbers	Number of Institutions	Textbook* Numbers
Elements, Principles, or General Geography	3	2,7	8	5,6,24
Economic Geography	0	-	2	1,36
Human Geography	1	11	0	-
World or Regional Geography	1	12	8	5,12,24,26
Geography of a Specific Region	2	**	2	***

*See Appendix G.

**No textbooks used.

***Any continent or regional course accepted.

science, sociology, government, philosophy, or religion. In Georgia, Kentucky, and Tennessee these requirements are in addition to Conservation of Natural Resources. Table 16 shows what courses were offered and what texts were used in geography in the thirty-three colleges and universities in the states of Alabama, Georgia, Kentucky, Mississippi, South Carolina, and Tennessee to fulfill the geography requirements of the state departments of education.

The average number of semester hours of geography required for

TABLE 16

COURSES IN GEOGRAPHY TOGETHER WITH TEXTS USED IN THIRTY-THREE HIGHER INSTITUTIONS TO FUL-
FILL CERTIFICATION REQUIREMENTS FOR ELEMENTARY TEACHERS IN FIVE SOUTHERN STATES

Name of Course	Number of Institutions Teaching Introductory Geography and Textbooks Used in**											
	Alabama	Georgia	Kentucky	Mississippi	S. Carolina	Tennessee						
	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.	No. of Coll.
Elements, Principles, or Gen. Geography	4	5,6	3	8,9 13	9	7,8,9 13,22, 23,24	1	13	2	5,13	3	7,10, 13
Economic Geography	0	-	0	-	1	19	1	14	2	28,32	2	1,19 78
Human Geography	0	-	1	8	0	-	0	-	0	-	1	26
World or Regional Geography	1	20	1	12	2	11,26	2	6	0	-	1	27
Geography of a Specific Region	1	31	0	-	0	-	0	-	0	-	1	*
Other Courses	1	*	1	21	2	*	0	-	0	-	1	*

*No text used. **See Appendix G for a list of text numbers. Certification requirements: Alabama—four semester hours from three of the following fields: economics, geography, history, political science, or sociology. Georgia—ten semester hours from English, science, or social science. Kentucky—nine semester hours from economics, history, government, or geography. Mississippi—six semester hours in one or more of eight social sciences. S. Carolina—twelve semester hours in three fields of social science. Tennessee—twelve semester hours of social studies of which four must be in Tennessee history, civics, and geography.

certification of elementary teachers by the sixty-three colleges and universities was four and nine-tenths. This represented an average of five and six-tenths semester hours for thirty-nine public institutions and three and eight-tenths semester hours for twenty-four private colleges and universities. Table 17 shows the average number of semester hours of geography offered by the public and private institutions in each of the eleven southern states.

TABLE 17

AVERAGE NUMBER OF SEMESTER HOURS OF GEOGRAPHY REQUIRED FOR ELEMENTARY TEACHERS BY SIXTY-THREE HIGHER INSTITUTIONS IN ELEVEN SOUTHERN STATES

State	Number of Institutions		Average Number of Semester Hours Required For Elementary Teachers		
	Public Inst.	Priv. Inst.	Public Institutions	Private Institutions	Public and Private Inst.
Alabama	4	1	5.2	9.0	6.0
Florida	3	3	6.9	3.0	4.9
Georgia	3	2	5.0	3.0	4.2
Kentucky	6	5	5.4	3.0	4.3
Louisiana	3	2	6.0	3.0	4.8
Mississippi	2	1	3.0	6.0	4.0
N. Carolina	5	4	6.6	6.0	6.3
S. Carolina	2	0	6.0	-	6.0
Tennessee	3	4	6.0	3.7	4.7
Texas	8	0	4.9	-	4.9
Virginia	1	1	3.0	3.0	3.0
Totals	39	24	Av. 5.6	Av. 3.8	Av. 4.9

Characteristics of Secondary Programs

The certification requirements for prospective secondary social studies teachers were much more uniform in the eleven southern states than were those for elementary teachers.

Every one of the states covered by the Southern Association required four years of college work, including a degree, as the minimum education standard for secondary teachers. Prerequisites for a standard secondary certificate most frequently consisted of (1) a bachelor's degree from a standard institution, (2) a major and a minor in subjects ordinarily taught in the high schools, and (3) a specified number of hours of professional education. These certification requirements could be met by any standard liberal arts college provided an education department was available or the required courses in professional education were taught.

Merely requiring a prospective secondary teacher to present a specified number of semester hours in a major and a minor field permits the administration of a college to offer a minimum number of subjects, usually the same as or similar to those taught in the secondary schools. Since geography is rarely taught in the secondary schools, it would be presumed that few colleges, especially the small liberal arts colleges, would require geography for a secondary social studies major. In fact, many liberal arts colleges were not included in this study because they did not require, and in some cases did not offer, geography in their curricula. The liberal arts colleges included in this study did offer programs in geography, but in 42 per cent of the private

institutions geography was not required of secondary social studies teachers (Table 18).

TABLE 18

STATUS OF CERTIFICATION REQUIREMENTS IN GEOGRAPHY FOR SECONDARY SOCIAL STUDIES TEACHERS IN ELEVEN SOUTHERN STATES

State	Total Insti- tutions	Did Not Require Geography	Required Similar Geog. Courses for Elementary and Secondary Teach.	Required Different Geography Courses For Elementary and Secondary Teachers
Alabama	5	3	1	1
Florida	6	0	5	1
Georgia	5	1	4	0
Kentucky	11	8	1	2
Louisiana	5	3	2	0
Mississippi	3	1	2	0
N. Carolina	9	3	2	4
S. Carolina	2	1	0	1
Tennessee	7	2	3	2
Texas	8	7	0	1
Virginia	2	0	1	1
Totals	63	29	21	13

Table 18 also shows that a total of twenty-nine institutions did not require any geography of their prospective secondary social studies teachers. In ten colleges, the only difference between

elementary and secondary geography requirements were that the elementary programs required six semester hours while the secondary programs required but three semester hours.

The subjects taught and the textbooks used in these ten institutions are shown in Table 19. In addition, Table 19 gives similar information about three other colleges and universities in which the elementary and secondary geography requirements were entirely different.

TABLE 19

COURSES IN GEOGRAPHY TOGETHER WITH TEXTS USED IN THIRTEEN
HIGHER INSTITUTIONS TO FULFILL CERTIFICATION
REQUIREMENTS IN EIGHT SOUTHERN STATES

Name of Course	Number of Institutions Teaching Course*	Textbooks** Used in Courses
Elements, Principles, or General Geography	6	5,7,8,27
Economic Geography	4	30,33
World or Regional Geography	1	20
Geography of a Specific Region	3	***
Conservation of Natural Resources	1	25
Other Courses	1	35

*Some institutions required more than one course in geography.

**See Appendix G for textbook numbers.

***Any continental course would fulfill these requirements.

The states of Florida, Kentucky, and Tennessee specifically required geography of social studies teachers. However, eight of the

eleven Kentucky institutions and two institutions in Tennessee did not require geography of secondary teachers although their respective state certification departments did require six semester hours of geography. All six of the Florida colleges and universities fulfilled the certification demands by requiring a course in Conservation of Natural Resources taught by members of the geography departments in the respective institutions. Seven states, in their certification requirements permitted geography to be selected from among several social science subjects to complete a social studies major.

The average number of semester hours of geography required for certification of secondary social studies teachers was two and one-half, which was the mean of the required two and four-tenths semester hours for public institutions and two and six-tenths semester hours for private colleges and universities. Table 20 shows the average number of semester hours of geography offered by the public and private institutions in each of the eleven southern states.

Summary

Ten states accredited by the Southern Association of Colleges and Secondary Schools required four years of college work for the standard elementary certificate; however, three of these states, Kentucky, Tennessee, and Texas did offer elementary certificates on the basis of two years of college preparation. For the secondary certificate, all of the eleven states required four years of college, including a degree.

Sixty-two of the colleges and universities required one or more courses in geography to secure the elementary certificate while

only thirty-four of these same sixty-three institutions demanded geography for the secondary social studies teachers.

TABLE 20

AVERAGE NUMBER OF SEMESTER HOURS OF GEOGRAPHY REQUIRED FOR
SECONDARY SOCIAL STUDIES TEACHERS BY SIXTY-THREE HIGHER
INSTITUTIONS IN ELEVEN SOUTHERN STATES

State	Number of Institutions		Average Number of Semester Hours Required for Secondary Social Studies Teachers		
	Public Inst.	Private Inst.	Public Inst.	Private Inst.	Public and Private Inst.
Alabama	4	1	0.8	9.0	2.4
Florida	3	3	5.7	3.0	4.3
Georgia	2	3	3.0	3.0	3.0
Kentucky	6	5	3.4	0.6	2.1
Louisiana	3	2	3.0	0.0	1.8
Mississippi	2	1	1.5	6.0	3.0
N. Carolina	5	4	3.0	3.0	3.0
S. Carolina	2	0	1.5	-	1.5
Tennessee	3	4	3.3	3.0	3.1
Texas	8	0	0.4	-	0.4
Virginia	1	1	3.0	3.0	3.0
Totals	39	24	2.4	2.6	2.5

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

It was the purpose of this study to analyze the programs in geography of sixty-three colleges and universities accredited by the Southern Association of Colleges and Secondary Schools. As a basis for analyzing the programs, an outline of essentials was determined for a one-semester introductory course in geography and this outline was compared with the introductory courses in the participating institutions.

Summary

Geography has been a part of the elementary school curriculum since about 1825. It was also a part of the curriculum of the first normal school when it opened at Lexington, Massachusetts in 1839. Geography continued to be strong in the elementary and secondary schools until after the turn of the twentieth century, when general science gradually replaced it in the secondary curriculum.

Sixteen states in the United States require that geography be included in the teacher education program of elementary teachers, and nine states have similar requirements for secondary social studies teachers.

The Outline of A Proposed Course in Geography For Public School Teachers, constructed by the author, covered four aspects of

geography: physical, economic, social, and political. Physical geography received more stress than did the other three aspects. Part I of the outline was mainly systematic geography for background purposes and Part II, the major section, was based upon climatic regions.

The outline, consisting of 586 items, was criticized by twelve prominent geographers. Of this number, 552 items were considered indispensable in an introductory course in geography by a majority of the jury members. Thirty-two items were checked as desirable by three or more of the jury, and two items were declared unnecessary by an equal number of jurors.

Nine colleges and universities offered introductory geography courses which followed an outline like the one constructed by the writer. Ten other institutions taught courses based upon syllabi that differed from the author's outline only by the omission of Chapters 3 and 16. One public university did not include the material of Chapter 16 in its syllabus. Thirty-six colleges and universities provided introductory courses similar to the writer's outline, but they varied in arrangement of material and emphasis. Seven institutions offered Economic Geography, Conservation of Natural Resources, or Political Geography as introductory courses. These courses bore little resemblance to the writer's outline, since such courses are not of the introductory type.

In addition to the comparison of the introductory courses, the following information concerning the programs was obtained:

1. The average enrollment of the sixty-three participating institutions was 2,500 students. Enrollments ranged from 235 students

in the smallest college to 11,000 in the two largest universities.

2. Twelve institutions required geography in the general education program. The remaining fifty-one colleges and universities required geography only of prospective elementary and/or secondary social studies teachers.

3. Supplemental material was used in the geography courses of fifty-nine institutions. Films and film strips proved most popular.

4. The state departments of education influenced to some degree the geography taught in 57 per cent of the participating institutions.

5. The content of the introductory courses was worked out by the instructors in twenty-six of the institutions and by the staff of the geography departments in thirteen colleges and universities.

6. Prerequisites for the introductory course in geography were required in only 9 per cent of the institutions.

7. Thirty-three per cent of the private colleges compared to 15 per cent of the public institutions were satisfied with their program for teachers.

Conclusions

After evaluating the data received from the sixty-three colleges and universities in this study, the following conclusions were drawn:

1. The outline that was constructed and revised should have one more chapter added to it. In this chapter a study should be made of one country, such as France, to afford the students an opportunity to tie together the physical aspects of geography that they have

studied with the industrial and political structures of the region.

2. The eleven states covered by the Southern Association compared favorably with the states in each of the other accrediting associations as far as required geography was concerned.

3. The number of semester hours of geography required of both elementary and secondary social studies teachers in sixty-three participating institutions was three and seven-tenths. This was seven-tenths of a semester hour more than that assumed by the writer at the outset of the study.

4. Geography remains stronger in the elementary schools than in the secondary schools. This trend is carried over into the teacher education programs. Ninety-eight per cent of the elementary programs compared to 54 per cent of the secondary social studies programs required geography.

5. Public colleges and universities offer more courses in geography and have stronger geography departments than do private institutions, especially the small liberal arts colleges.

6. The small colleges, especially the private institutions, require similar geography programs of elementary and secondary social studies teachers more frequently than do public colleges and universities.

7. Certification requirements directly and indirectly influence the number and kind of geography courses included in the teacher education programs.

8. Colleges and universities that have instructors well-qualified in geography and institutions that have strong geography departments tend to require more geography of prospective teachers than is

specified in the state certification regulations.

Recommendations

On the basis of the data taken from the questionnaires received, the following recommendations are made:

1. Require a minimum of three semester hours, and preferably six semester hours, of geography of all prospective teachers; secondary as well as elementary.
2. If a special course for prospective teachers cannot be offered, include a laboratory period with the introductory course so that the students may have the opportunity to obtain help and guidance concerning the phases of geography that are pertinent to their special needs.
3. In those states where conservation of natural resources is not required include some work in conservation in one of the other required geography courses.
4. Use texts with recent data in them. Too many institutions were using texts fifteen to twenty years old.
5. Include more geography in the curricula of the liberal arts colleges, especially those that offer teacher education programs.
6. As a means of overcoming the inadequate background in geography of many of the in-service teachers, offer courses in geography at hours in-service teachers can attend.
7. Have college geography instructors offer more supervision and guidance to in-service teachers by visiting the schools within the area served by the college or university.

8. Have the Southern Association make an effort to improve the geography programs in the member colleges and universities.

Further Research

In this study the outline that was constructed was partly systematic and partly regional, the regions being of the climate type. Further research should be conducted to compare the results obtained by teaching one or more sections in introductory geography using the writer's outline with the results obtained from teaching a control section or sections using a syllabus based upon political regions.

A study is also needed to determine what content should be included in an outline for an introductory course in geography for students in general education. It was assumed by the writer, at the outset of the study, that needs of students in general education differed from the needs of prospective public school teachers of geography.

Lastly, research should be conducted to ascertain the best methods of helping in-service teachers who lack an adequate background in geography.

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APPENDIX A

A Copy of the Letter Mailed to the Deans of
Colleges and Heads of the Schools or
Colleges of Education

Box 3106, University Station
Gainesville, Florida
October 21, 1955

I am planning a study of the courses in geography given to prospective elementary teachers and prospective secondary social studies teachers. My plan is to send a questionnaire to the person in charge of elementary education, the person in charge of secondary education, and the person in charge of teaching geography to education majors in all of the four year institutions accredited by the Southern Association of Colleges and Secondary Schools. I would appreciate receiving the information asked for on the enclosed sheet as a prelude to the study.

This study has the approval of my supervisory committee for the Ed. D. degree at the University of Florida.

Respectfully yours,

Robert B. Marcus

APPENDIX B

Preliminary Questionnaire Sent to
the Deans of the Colleges and
the Heads of the Schools or
Colleges of Education

PRELIMINARY QUESTIONNAIRE

1. Do you offer a program for the training of elementary teachers that can be completed in 2 _____, 4 _____, 5 _____ years? Please check all that apply.
2. Approximately how many students completed each of the above elementary programs between June 15, 1954 and June 15, 1955?
2 _____, 4 _____, 5 _____ years.
3. What is the name and title of the person in charge of elementary education? _____
4. Do you offer a program for the training of secondary teachers (Social Studies majors) that can be completed in 2 _____, 4 _____, 5 _____ years. Please check all that apply.
5. Approximately how many students completed each of the above secondary programs (Social Studies majors only) between June 15, 1954 and June 15, 1955? 2 _____, 4 _____, 5 _____ years.
6. What is the name and title of the person in charge of secondary education? _____
7. What geography course(s) is/are required of all elementary education majors? _____
8. What geography course(s) is/are required of all secondary Social Studies majors? _____
9. What is the name and title of the person in charge of teaching geography to prospective teachers?

10. Would you be willing for your institution to take part in a study of the programs in geography and the content of the geography courses given to prospective elementary and secondary teachers? Your part in this study will consist of answering a six page questionnaire, with a minimum of correspondence with the persons in your college concerned with the questionnaire.
Yes _____ No _____
11. What is the name and address of your institution? _____

APPENDIX C

Letter Mailed to Members of the Jury

Box 3106, University Station
Gainesville, Florida
October 31, 1955

I am planning a study of the college courses in geography given to prospective elementary teachers and to prospective secondary social studies teachers. As part of this study I am developing an outline of material I deem essential for such an introductory course.

I would like for you to serve as a member of a jury, composed of prominent persons in the field of geography, to look over my outline and criticize it both from the standpoint of the material selected and the arrangement of material. At the bottom of this letter there is a place to indicate whether you would be willing to serve as a member of the jury. There is also enclosed a stamped addressed envelope for your convenience.

This study has the approval of my supervisory committee for the Ed. D. degree at the University of Florida.

Respectfully yours,

Robert B. Marcus
Instructor in Physical
Sciences
University of Florida

_____ I will serve as a member of the jury.

_____ I will not serve as a member of the jury.

APPENDIX D

Letter Mailed to the Instructors of Geography

University of Florida
Gainesville

Department of Geography

Several weeks ago a preliminary questionnaire was sent to the Dean of your institution asking for the name of the person who teaches geography to prospective elementary teachers and to prospective secondary social studies teachers. He was also asked if he would be willing for your institution to take part in a study of the programs in geography of the institutions accredited by the Southern Association of Colleges and Secondary Schools. Your administration expressed its willingness to take part in the study, and your name was given to me as the professor who teaches geography to prospective teachers.

I would appreciate your filling in the enclosed questionnaire as completely as possible. A list of the participating institutions will be mentioned in the dissertation, but the information will not be used in such a way as to reveal the names of the persons or the institutions giving the information.

This dissertation has the approval of my Advisory Committee for the Ed D degree at the University of Florida.

Respectfully yours,

Robert B. Marcus
Instructor
Physical Sciences

APPENDIX E

Questionnaire Sent to the Instructors of Geography

GEOGRAPHY QUESTIONNAIRE

I. GENERAL INFORMATION:

1. Name and address of institution: _____.
2. Enrollment of institution: _____.

II. TYPES OF PROGRAMS OFFERED:

1. What course(s) in geography is/are required of all prospective elementary teachers?

Course No.	Credit	Course Name	Text-author
_____	_____	_____	_____.
_____	_____	_____	_____.
_____	_____	_____	_____.
_____	_____	_____	_____.

2. What course(s) in geography is/are required of all prospective secondary social studies teachers?

Course No.	Credit	Course Name	Text-author
_____	_____	_____	_____.
_____	_____	_____	_____.
_____	_____	_____	_____.
_____	_____	_____	_____.

3. If specific courses in geography are not required, what geography courses do you offer that are suitable or desirable for prospective teachers?

Course No.	Credit	Course Name	Text-author
_____	_____	_____	_____.
_____	_____	_____	_____.
_____	_____	_____	_____.
_____	_____	_____	_____.

III. ORGANIZATION:

1. Is any geography included in general education in your teacher education program?
 Yes _____. No _____. If yes, approximately how much? _____

2. Is the basic geography that is required a general college requirement or is it a requirement provided especially for elementary teachers and secondary social studies teachers?

3. Do you offer a specific course in Methods of Teaching Geography?
 Yes _____. No _____. If yes, what text do you use? _____

4. Are any teaching methods included in the introductory course, such as supplementary material, or as aids to show the students how they might teach geography?
 Yes _____. No _____. If yes, approximately how much? _____

5. Do you use supplementary material in the introductory course, or in other required courses, such as visual aids, field trips, or laboratory equipment?
 Yes _____. No _____. If yes, what do you use? _____

6. What agencies formulate the requirements in geography as to the course(s) that prospective teachers must take?

7. Who works out the content to be included in the various courses that meet the above requirements?

8. The courses in geography are under the supervision of: (Check appropriate one, X)
- a. Geography Department _____.
 - b. Education Department _____.
 - c. Education and Geography Departments _____.
 - d. Other Departments: specify department(s) _____.
9. Are any prerequisites required of students taking the basic course in geography?
- Yes _____. No _____. If yes, what are they? _____
-

10. Are you satisfied with the geographic education prospective teachers have received upon completion of your program?

Yes _____. No _____. If no, what changes would you make in your geography program for the education of elementary teachers and secondary social studies teachers? (If more space is needed for comments, use back of sheet).

IV. QUESTIONS PERTAINING TO ENCLOSED "OUTLINE OF PROPOSED COURSE IN GEOGRAPHY FOR PUBLIC SCHOOL TEACHERS."

1. Do you follow closely the ARRANGEMENT of the textbook you use in your introductory course?
- Yes _____. No _____.
2. Do you cover the entire text in your introductory course? Yes _____. No _____. (The name of the introductory text was given in questions II 1 and II 2).
3. What type of organization do you use in your introductory course in geography? (Check the appropriate one: X). (If the answers to V 1 and V 2 were yes, it is unnecessary to answer this question).
- _____ A. TOPICAL (Example: separate chapters on climate, land-forms, vegetation, water resources, minerals, etc.).
 - _____ B. REGIONAL (Example: climatic regions, physical regions, political regions, etc.).

4. If you follow a regional organization, what type of regions do you use?

_____.

5. Why do you use the type of organization (topical or regional) that you use?

_____.

_____.

6. Refer to the enclosed "Outline of Proposed Course in Geography For Public School Teachers." Please place an (X) in front of the letter or numeral of each item or heading on the outline that refers to material covered in your introductory geography course. (If your answers to V 1 and V 2 were yes, this is unnecessary. If your answer is no and you use a syllabus for your introductory course, you may send a copy of the syllabus instead of checking the enclosed outline. The syllabus will be returned if you desire).

7. List briefly any topics included in your introductory course that are not included in the enclosed outline. (If you desire you may insert these topics in the outline at the appropriate places).

_____.

_____.

_____.

8. What do you think should be added to or deleted from the enclosed outline to make it more valuable for the education of prospective teachers?

_____.

_____.

_____.

9. Do you think that a special course in geography should be given for prospective teachers?

Yes _____. No _____. Why? _____

_____.

_____.

10. Remarks: _____

_____.

APPENDIX F

List of Participating Institutions

The institutions taking part in this study:

1. Alabama College, Montevallo, Alabama.
2. Alabama Polytechnic Institute, Auburn, Alabama.
3. State Teachers College, Livingston, Alabama.
4. Talladega College, Talladega, Alabama.
5. University of Alabama, University, Alabama.
6. Florida Agricultural and Mechanical University, Tallahassee, Florida.
7. Florida Southern College, Lakeland, Florida.
8. Florida State University, Tallahassee, Florida.
9. University of Miami, Coral Gables, Florida.
10. University of Florida, Gainesville, Florida.
11. University of Tampa, Tampa, Florida.
12. Georgia Teachers College, Collegeboro, Georgia.
13. Georgia State College for Women, Milledgeville, Georgia.
14. Morris Brown College, Atlanta, Georgia.
15. University of Georgia, Athens, Georgia.
16. Wesleyan College, Macon, Georgia.
17. Asbury College, Wilmore, Kentucky.
18. Berea College, Berea, Kentucky.
19. Centre College, Danville, Kentucky.
20. Morehead State College, Morehead, Kentucky.
21. Murray State College, Murray, Kentucky.
22. Nazareth College, Louisville, Kentucky.
23. Union College, Barbourville, Kentucky.
24. University of Kentucky, Lexington, Kentucky.
25. University of Louisville, Louisville, Kentucky.
26. Ursuline College, Louisville, Kentucky.
27. Western Kentucky State College, Bowling Green, Kentucky.
28. Louisiana Polytechnic Institute, Ruston, Louisiana.
29. Louisiana State University, Baton Rouge, Louisiana.
30. Saint Mary's Dominican College, New Orleans, Louisiana.
31. Southwestern Louisiana Institute, Lafayette, Louisiana.
32. Xavier University of Louisiana, New Orleans, Louisiana.
33. Alcorn Agricultural and Mechanical College, Lorman, Mississippi.
34. Mississippi College, Clinton, Mississippi.
35. Mississippi Southern College, Hattiesburg, Mississippi.
36. Appalachian State Teachers College, Boone, North Carolina.
37. Barber-Scotia College, Concord, North Carolina.
38. Catawba College, Salisbury, North Carolina.
39. East Carolina College, Greenville, North Carolina.
40. Lenoir-Rhyne College, Hickory, North Carolina.
41. Livingston College, Salisbury, North Carolina.
42. University of North Carolina, Chapel Hill, North Carolina.
43. Western Carolina College Cullowhee, North Carolina.
44. Women's College, University of North Carolina, Greensboro, N. Car.
45. South Carolina State College, Orangeburg, South Carolina.

46. University of South Carolina, Columbia, South Carolina.
47. Austin Peay State College, Clarksville, Tennessee.
48. Carson-Newman College, Jefferson City, Tennessee.
49. Knoxville College, Knoxville, Tennessee.
50. LeMoyn College, Memphis, Tennessee.
51. Lincoln Memorial University, Harrogate, Tennessee.
52. Middle Tennessee State College, Murfreesboro, Tennessee.
53. University of Tennessee, Knoxville, Tennessee.
54. East Texas State Teachers College, Commerce, Texas.
55. North Texas State College, Denton, Texas.
56. Sam Houston State Teachers College, Huntsville, Texas.
57. Southwest Texas State Teachers College, San Marcos, Texas.
58. Sul Ross State College, Alpine, Texas.
59. Texas College of Arts and Industries, Kingsville, Texas.
60. Texas Southern University, Houston, Texas.
61. West Texas State College, Canyon, Texas.
62. Virginia State College, Petersburg, Virginia.
63. Virginia Union University, Richmond, Virginia.

APPENDIX G

**Geography Textbooks Used in the Required
Geography Courses by Sixty-Three
Participating Institutions**

The following texts were used in the introductory courses in geography at the sixty-three colleges and universities participating in this study:

The institutions preceded by (*) followed the writer's outline in teaching the introductory course.

The institutions preceded by (#) omitted Chapter 3 and 16 in the writer's outline.

The institutions preceded by (\$) omitted Chapter 16 from the writer's outline.

The institutions preceded by (e) omitted the sections of the occupance and economies in each of the Chapters 5 to 15.

TEXT NUMBER	AUTHOR(S)	NAME OF TEXT
1.	Bengston, Nels A., and Van Royen, William R.	<u>Fundamentals of Economic Geography</u>
	One private college finished this text but did not follow the arrangement.	
2.	Case, Earl C., and Bergemark, Daniel R.	<u>College Geography</u>
	One public college used this text but did not follow the arrangement or finish it.	
3.	Colby, Charles C., and Foster, Alice	<u>Economic Geography</u>
	One private college followed the arrangement and finished this text.	

4. Davis, Darrell Haug The Earth and Man
 One public college used this text but did not follow the arrangement or finish it.
 One private college used this text but did not follow the arrangement or finish it.

5. Durand, Loyal, Jr. World Geography
 Four colleges used this text:
 a. One public college followed the arrangement and finished it.
 # b. One public college finished the text but did not follow its arrangement.
 c. Two private colleges followed the arrangement and finished it.

6. Finch, Vernor C., and Trewartha, Glenn T. Elements of Geography
 Nine public colleges used this text:
 # a. Two followed the arrangement and finished it.
 *# b. Two finished it but did not follow the arrangement.
 # c. Two followed the arrangement but did not finish it.
 # d. Three did not follow the arrangement or finish it.

7. Finch, Vernor C., Trewartha, Glenn T., and Shearer, M. H. The Earth and Its Resources
 Two public colleges used this text:
 a. One followed the arrangement and finished it.
 b. One followed the arrangement but did not finish it.
 One private college finished this text but did not follow the arrangement.

8. Freeman, Otis W., and Raup, H. F. Essentials of Geography
 Four public colleges used this text:
 * a. Two followed the arrangement and finished it.
 # b. Two followed the arrangement but did not finish it.

Three private colleges used this text:

- a. One followed the arrangement and finished it.
- b. One followed the arrangement but did not finish it.
- c. One finished it but did not follow the arrangement.

9. Heintzelman, Oliver H., and World Regional Geography
Highsmith, Richard M., Jr.

* Three public colleges followed the arrangement of the text and finished it.

One private college followed the arrangement of the text and finished it.

10. Huntington, Ellsworth Principles of Human Geography

One public college followed the arrangement of the text and finished it.

One private college followed the arrangement of the text and finished it.

11. James, Preston E. An Outline of Geography

One public college used this text but did not follow the arrangement or finish it.

12. James, Preston E. A Geography of Man

Two public colleges used this text:

- a. One followed the arrangement and finished it.
- b. One used the text but did not follow the arrangement or finish it.

13. Kendall, Henry M., Glendinning, Introduction to
Robert M., and McFadden, Geography
Clifford H.

Five public colleges used this text:

- * a. Two followed the arrangement and finished it.
- # b. One followed the arrangement but did not finish it.
- @ c. Two used the text but did not follow the arrangement or finish it.

14. Klimm, Lester E.,
Starkey, Otis P., and
Hall, Norman F. Introductory Economic
Geography
One private college followed the arrangement of this
text and finished it.
15. Lackey, Earl E., and
Anderson, Esther S. Regions and Nations of
the World
One public college followed the arrangement of this
text and finished it.
16. Peattie, Roderick New College Geography
One public college used this text but did not follow
the arrangement or finish it.
17. Percy, G. Etzel, and
Fifield, Russell H. World Political Geography
One private college used this text but did not follow
the arrangement or finish it.
18. Renner, George T. Conservation of Natural
Resources
One private college used this text but did not follow
the arrangement or finish it.
19. Renner, George T., Durand,
Loyal, Jr., White, C. Langdon,
and Gibson, Weldon B. World Economic
Geography
One private college followed the arrangement of
this text but did not finish it.
20. Russell, Richard Joe, and
Kniffen, Fred Bowerman Cultural Worlds
One public college used this text but did not
follow the arrangement or finish it.
One private college used this text but did not
follow the arrangement or finish it.

21. Smith, Guy-Harold Conservation of
Natural Resources

One private college followed the arrangement of this text and finished it.

22. Staats, J. Riley, and Harding, George E. Elements of World
Geography

Two public colleges used this text:

- a. One followed the arrangement and finished it.
- \$ b. One used the text but did not follow the arrangement or finish it.

23. Stamp, L. Dudley, and Kimble, George H. T. The World--A General
Geography

One private college followed the arrangement of this text and finished it.

24. Wheeler, Jesse H., Jr., Kostabade, J. Trenton, and Thoman, Richard S. Regional Geography of
the World

One public college followed the arrangement of this text and finished it.

One private college followed the arrangement of this text and finished it.

25. Whitaker, J. Russell, and Ackerman, Edward A. American Resources

One private college followed the arrangement of this text and finished it.

26. White, C. Langdon, and Renner, George T. Geography: An Introduction
to Human Ecology

One private college used this text but did not follow the arrangement or finish it.

27. White, C. Langdon, and Human Geography
 Renner, George T.

Two public colleges used this text:

- a. One followed the arrangement and finished it.
- * b. One followed the arrangement but did not finish it.

Two private colleges used this book:

- * a. One finished it but did not follow the arrangement.
- # b. One followed the arrangement but did not finish it.

Other Texts Used in Required Geography Courses:

- | | | |
|-----|--|--|
| 28. | Dicken, Samuel Newton | <u>Economic Geography</u> |
| 29. | Jones, Clarence F., and
Darkenwald, Gordon G. | <u>Economic Geography</u> |
| 30. | Parsons, Reuben L. | <u>Conserving American
Resources</u> |
| 31. | Smith, J. Russell | <u>North America</u> |
| 32. | Smith, J. Russell, and
Phillips, M. Ogden | <u>Industrial and Commercial
Geography</u> |
| 33. | Smith, J. Russell, and
Phillips, M. Ogden | <u>North America</u> |
| 34. | Van Valkenberg, Samuel | <u>Elements of Political
Geography</u> |
| 35. | Whitbeck, Ray H., and
Finch, Vernor C. | <u>Economic Geography</u> |
| 36. | White, C. Langdon, and
Foscoe, Edwin J. | <u>Regional Geography of
Anglo-America</u> |

APPENDIX H

**Initial Outline of Proposed Course in Geography
For Public School Teachers**

OUTLINE OF A PROPOSED COURSE IN GEOGRAPHY FOR PUBLIC SCHOOL TEACHERS

PART I

CHAPTER 1

- A. DEFINITION OF GEOGRAPHY.
- B. THE FIELD OF GEOGRAPHY.
- C. THE OBJECTIVES OF THIS COURSE.

CHAPTER 2

THE EARTH AND ITS REPRESENTATION

A. THE EARTH AS A SPHERE.

- 1. The earth's position in the solar system.
 - a. Relationship with the sun.
 - b. Relationship with other planets.
 - c. Relationship with the moon--tides.
- 2. The earth's movements.
 - a. Rotation.
 - b. Revolution.
- 3. The shape of the earth.
- 4. The size of the earth.

B. REPRESENTATION OF THE EARTH BY GLOBES.

- 1. Ancient globes.
- 2. Modern globes.
 - a. Types of supports for globes.
 - b. Types of globes.
 - c. Lines on globes.
 - (1) Meridians.
 - (2) Parallels.

C. REPRESENTATION OF THE EARTH BY MAPS.

- 1. Definition of a map.
- 2. Definition and utility of maps.
- 3. Difficulties in representing the earth on maps.
- 4. Map projections.
 - a. Conformal.
 - b. Equal area.

5. Map direction.
 - a. True north.
 - b. Magnetic north.
 - c. Grid north.
6. Map symbols.
 - a. Natural features.
 - b. Cultural features.

CHAPTER 3

THE POPULATION OF THE WORLD

A. POPULATION NUMBERS.

1. By continent—1950.
2. Changes in numbers by continent and country, 1650-1950.

B. BASES FOR POPULATION CHANGE.

1. Factors affecting high birth rate.
2. Factors affecting low birth rate.
3. Factors affecting death rate.
4. Migration.

C. PATTERN OF POPULATION DISTRIBUTION.

1. Relationship to physical environment.
2. Relationship to occupations.
 - a. Hunting and fishing.
 - b. Forest industries and gathering economies.
 - c. Pastoral activities.
 - d. Subsistence agriculture.
 - e. Commercial agriculture.
 - f. Commercial fishing.
 - g. Mining.
 - h. Complex occupations.
3. Relationship to language and religion.

D. DENSITY OF POPULATION.

1. Areas of dense population.
2. Problems of overpopulation.
3. Possible solutions for overpopulation.

CHAPTER 4

BASIC NATURAL RESOURCES OF THE WORLD

A. INTRODUCTION.

1. Importance of physical factors in influencing man's activities.
2. The hydrologic cycle.
3. The carbon dioxide cycle.

B. CLIMATE.

1. Factors affecting climatic elements.
2. World temperature pattern.
3. World precipitation pattern.
4. Classification of climates.

C. VEGETATION AND ANIMAL LIFE.

1. Factors affecting vegetation.
2. Factors affecting animal life.
3. Types of vegetation.
 - a. Forests.
 - b. Grasslands.
 - c. Desert and steppe shrubs and grasses.
4. World pattern of natural vegetation.

D. SOIL.

1. Soil characteristics.
2. Balance between soil, climate, and vegetation.
3. Great soil groups.
4. Immature soils, alluvial soils, bog soils.

E. LANDFORMS.

1. Mountains.
2. Plateaus.
3. Plains.

F. WATER.

1. Oceans.
 - a. World pattern of oceans.
 - b. Source of food—fish, etc.
2. Inland waters.
3. Subsurface water.

G. MINERALS.

1. Fuel minerals.
 - a. List of fuel minerals.
 - b. World pattern of fuel minerals.
2. Metallic minerals.
 - a. List of metallic minerals.
 - b. World pattern of metallic minerals
3. Non-metallic minerals.
 - a. List of non-metallic minerals.
 - b. World pattern of non-metallic minerals.

PART II

INTRODUCTION

- A. INTRODUCTION TO THE FOLLOWING CHAPTERS (5-16) ON CLIMATIC REGIONS.
- B. REASONS FOR CLIMATIC REGIONAL APPROACH.
- C. DESCRIPTION OF MATERIAL TO BE DISCUSSED IN EACH OF THE CHAPTERS ON CLIMATIC REGIONS.

CHAPTER 5

THE TROPICAL RAIN FOREST CLIMATE

(Note: This chapter is outlined in greater detail than any of the following chapters on the climatic regions. This is done to illustrate how detailed each chapter would be covered).

A. LOCATION AND LANDFORMS.

1. General location---a belt straddling the equator and extending poleward to approximately 5°N and 5°S. Includes general location of Monsoon Rain Forests and Trade Wind Coast Rain Forests. Extends as far poleward as 25° in some locations.
2. Location and Landforms by continents.
 - a. Africa.
 - (1). Location---Congo Basin, adjacent parts of West Africa, coastlands of Gulf of Guinea, east coast of island of Madagascar.

- (2). Landforms---a basin within a plateau; Congo Basin. Coastal plain bordered by plateau; West Africa and Gulf of Guinea. Plateau descending sharply to coast; east coast of Madagascar.
- b. Asia and Adjacent Islands.
 - (1). Location--- peninsula and shores of southern Asia, eastern Indochina, East Indies.
 - (2). Landforms---mountains with coastal lowlands and valleys. Some low, flat islands.
- c. North America.
 - (1). Location--- east coast of Central America, northeastern sides of higher islands in West Indies.
 - (2). Landforms---coastal plains to the windward side of rugged mountains in Central America. Islands of West Indies mountainous in the interior with coastal plains.
- d. South America.
 - (1). Location--- Amazon Basin, parts of north-eastern coast of South America, coast of southeastern Brazil.
 - (2). Landforms---interior plain bordered by uplands or mountains on the north, south, and west; Amazon Basin. coastal plains bordered by highlands; northeastern coast of South America and coastal southeastern Brazil.

B. CLIMATE.

1. Introduction to the climate including some descriptive literature of the climate typical of this region.
2. General features of the climate---hot, wet all year.
No month below 64.4°F.
3. Temperature---average 75° - 80° F annually.
4. Precipitation---usually 60 inches or more annually. No month under 2.4 inches.
5. Mountain climate in the Tropical Rain Forest Regions.

C. VEGETATION AND ANIMAL LIFE.

1. Natural vegetation---mainly deciduous evergreen forests.
2. Imported vegetation.
3. Native animal life---largely insects, birds, reptiles, and animals of aboreal type.
4. Imported animals.

D. SOILS.

1. Lateritic.
2. Alluvial.
3. Volcanic.

E. THE OCCUPANCE IN THE TROPICAL RAIN FOREST CLIMATE.

1. Distribution of population.
2. Difference in cultures of people in various Tropical Rain Forests.
3. Effect of coastline upon distribution of population, culture, and economies.
4. Cities.

F. THE ECONOMIES IN THE TROPICAL RAIN FOREST CLIMATE.

1. Primitive hunting and fishing.
2. Agriculture.
 - a. Migratory or shifting agriculture.
 - (1). Locations.
 - (2). Crops grown.
 - b. Plantation agriculture.
 - (1). Locations.
 - (2). Crops grown.
3. Forest economies.
 - a. Characteristics of the forests.
 - b. Problems in exploiting.
4. Mining.
 - a. Locations.
 - b. Minerals obtained.
5. Manufacturing.
 - a. Reasons for not being so important.
 - b. Exceptions—example, Singapore.

G. SUMMARY.

CHAPTER 6

THE TROPICAL SAVANNA CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE

1. Introduction
2. General features.
3. Temperatures.
4. Precipitation.
5. Mountain climate in the Tropical Savanna Regions.

C. VEGETATION AND ANIMAL LIFE.

D. SOILS.

E. THE OCCUPANCE IN THE TROPICAL SAVANNA CLIMATE.

1. Distribution of population.
2. Effect of coastline upon distribution of population, culture, and economies.
3. Cities.

F. THE ECONOMIES IN THE TROPICAL SAVANNA CLIMATE

1. Agriculture.
 - a. Shifting agriculture.
 - b. Irrigation agriculture.
 - c. Upland agriculture.
 - d. Plantation agriculture.
2. Livestock Raising.
 - a. Nomadic grazing.
 - b. Commercial grazing.
 - c. Religious pastoralism—example, India.
3. Forest economies.
4. Mining.
5. Manufacturing.

G. SUMMARY.

CHAPTER 7

THE TROPICAL STEPPE AND DESERT CLIMATE

A. LOCATION AND LANDFORMS.

1. General location and causes of deserts.
2. Location of major tropical deserts of the world.
3. Landforms.
 - a. Types of deserts.
 - b. Water features.
 - c. Mountain regions.
 - d. Coastline.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Winds.
6. Mountain climate in the Tropical Steppe and Desert Regions.

C. VEGETATION AND ANIMAL LIFE.

D. SOILS.

E. THE OCCUPANCE IN THE TROPICAL STEPPE AND DESERT CLIMATE.

1. Distribution and type of population.
 - a. Areas of sparse population.
 - b. Areas of concentrated population.
 - c. Native population in the deserts--type examples.
2. Tropical deserts as birthplace of monotheistic religions.

F. THE ECONOMIES IN THE TROPICAL STEPPE AND DESERT CLIMATE.

1. Agriculture.
 - a. Sedentary subsistence agriculture.
 - b. Sedentary commercial agriculture.
2. Livestock Raising.
 - a. Pastoral nomadism.
 - b. Large livestock ranches.
3. Mining.
4. Manufacturing.

G. SUMMARY.

CHAPTER 8

THE DRY SUMMER SUBTROPICAL CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.

4. Precipitation.
5. Winds.
6. Mountain climate in the Dry Summer Subtropical Regions.

C. THE OCEAN AND ITS COASTS.

1. Effect of cool current along coast.
2. Type of shorelines.
3. Influence of shorelines in history.

D. VEGETATION AND ANIMAL LIFE.

E. SOILS.

F. THE OCCUPANCE IN THE DRY SUMMER SUBTROPICAL CLIMATE.

1. Importance of area as birthplace of several important civilizations.
2. Distribution and density of population.
3. Cities.

G. THE ECONOMIES IN THE DRY SUMMER SUBTROPICAL CLIMATE.

Introduction—historical significance of pastoralism and its replacement by agriculture.

1. Agriculture.
 - a. General classes of crops produced.
 - b. Cultivated zones as determined by elevation.
 - c. Agricultural regions of the Dry Summer Subtropics.
 - (1). Mediterranean Basin.
 - (2). California.
 - (3). Central Valley of Chile.
 - (4). South Africa.
 - (5). Southwest Australia.
2. Livestock raising.
 - a. Type of animals.
 - b. Influence of type of animals upon conservation problems.
3. Forest economies.
 - a. Type of trees.
 - b. Watershed problems.
4. Mining.
 - a. Locations.
 - b. Minerals obtained.
5. Manufacturing.
 - a. Factors adverse to manufacturing.
 - b. Factors favorable to manufacturing in California.

H. SUMMARY.

CHAPTER 9

THE MARINE WEST COAST CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Winds.
6. Mountain climate in the Marine West Coast Regions.

C. THE OCEAN AND ITS COASTS.

1. Effect of shortage of arable land along coasts.
2. Effect of off-shore warm current.

D. VEGETATION AND ANIMAL LIFE.

E. SOILS.

F. THE OCCUPANCE IN THE MARINE WEST COAST CLIMATE.

1. Distribution of population.
2. Effect of coastline upon distribution of population, culture, and economies.
3. Cities.

G. THE ECONOMIES IN THE MARINE WEST COAST CLIMATE.

1. Agriculture.
 - a. Western Europe--types of crops raised and locations.
 - b. Northwestern United States and Canada--types of crops raised and locations.
 - c. Southern Chile--types of crops raised and locations.
 - d. Tasmania and New Zealand--types of crops raised and locations.
2. Livestock raising.
 - a. Cattle--types and locations.
 - b. Sheep--locations.
3. Forest economies.
 - a. Northwestern United States and Canada--types of trees and importance.
 - b. Western Europe--types of trees and importance.
 - c. Southern Chile--types of trees and importance.

- d. New Zealand--types of trees and importance.
- 4. Fishing.
 - a. Western Europe--types of catch and importance.
 - b. Other areas in Marine West Coast Regions--types of catch and importance.
- 5. Mining.
 - a. Western Europe--minerals mined, locations, and importance.
 - b. Other areas in Marine West Coast Regions--minerals mined, locations, and importance.
- 6. Manufacturing.
 - a. Western Europe.
 - (1). Area included in Western European manufacturing belt.
 - (2). Reasons for importance of manufacturing.
 - b. Other areas of manufacturing in Marine West Coast Regions.

H. SUMMARY.

CHAPTER 10

THE HUMID SUBTROPICAL CLIMATE

A. LOCATION AND LANDFORMS.

- 1. General location.
- 2. Location and landforms by continents.

B. CLIMATE.

- 1. Introduction.
- 2. General features.
- 3. Temperature.
- 4. Precipitation.
- 5. Winds.
- 6. Mountain climate in the Humid Subtropical Regions.

C. THE OCEAN AND ITS COASTS.

- 1. Effect of off-shore warm currents on eastern side of land masses.
- 2. Effect of type of coastline upon harbor facilities.

D. VEGETATION AND ANIMAL LIFE.

E. SOILS

F. THE OCCUPANCE IN THE HUMID SUBTROPICAL CLIMATE.

1. Distribution of population.
2. Differences in cultures and occupance in the Orient and the Occident.
3. Effect of coastline upon distribution of population, culture, and economies.
4. Cities.

G. THE ECONOMIES IN THE HUMID SUBTROPICAL CLIMATE.

1. Agriculture.
 - a. General classes of crops produced.
 - b. Agricultural regions of the Humid Subtropics.
 - (1). The Orient--types of crops produced and locations.
 - (2). Southern United States--types of crops produced and locations.
 - (3). South America--types of crops produced and locations.
 - (4). South Africa and Australia--types of crops produced and locations.
2. Livestock raising.
 - a. Factors favorable for livestock raising.
 - b. Factors adverse to livestock raising.
 - c. Livestock regions of the Humid Subtropics.
 - (1). Southern United States--types of animals raised and locations.
 - (2). South America--types of animals raised and locations.
 - (3). South Africa and Australia--types of animals raised and locations.
3. Forest Economies.
 - a. Southern United States.
 - (1). Importance.
 - (2). Products.
 - b. South America--products produced and locations.
4. Fishing.
 - a. Types of catch.
 - b. Locations.
5. Mining.
 - a. Minerals exploited.
 - b. Importance.
 - c. Locations.
6. Manufacturing.
 - a. Orient--goods manufactured and locations.
 - b. Southern United States--goods manufactured and locations.
 - c. Southern Hemisphere--goods manufactured and locations.

H. SUMMARY.

CHAPTER 11

THE HUMID CONTINENTAL LONG SUMMER CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Pressure and winds.
6. Mountain climate in the Humid Continental Long Summer Regions.

C. VEGETATION AND ANIMAL LIFE.

D. SOILS.

E. THE OCCUPANCE IN THE HUMID CONTINENTAL LONG SUMMER CLIMATE.

1. Distribution of population.
2. Comparison of standards of living in Orient with those in Occident.
3. Cities.

F. THE ECONOMIES IN THE HUMID CONTINENTAL LONG SUMMER CLIMATE.

1. Agriculture.
 - a. Types of agriculture.
 - b. Agricultural regions in the Humid Continental Long Summer Climate.
 - (1). United States—type of crops raised, locations, and importance.
 - (2). Europe—type of crops raised, locations, and importance.
 - (3). Asia—type of crops raised, locations, and importance.
2. Livestock raising.
 - a. United States—type of animals raised, locations, and importance.
 - b. Europe—type of animals raised, locations, and importance.
3. Forest economies.
 - a. Types of forests.
 - b. Locations.
 - c. Importance.

4. Fishing.
 - a. Types of catch.
 - b. Locations where caught.
 5. Mining.
 - a. United States--minerals exploited, locations, and importance.
 - b. Europe--minerals exploited, locations, and importance.
 - c. Asia--minerals exploited, locations, and importance.
 6. Manufacturing.
 - a. United States--reasons for importance, locations, and products.
 - b. Europe--reasons for importance, locations, and products.
 - c. Asia--reasons for importance, locations, and products.
- G. SUMMARY.

CHAPTER 12

THE HUMID CONTINENTAL SHORT SUMMER CLIMATE

- A. LOCATION AND LANDFORMS.
1. General location.
 2. Location and landforms by continents.
- B. CLIMATE.
1. Introduction.
 2. General features.
 3. Temperature.
 4. Precipitation.
 5. Winds.
 6. Mountain climate in the Humid Continental Short Summer Regions.
- C. VEGETATION AND ANIMAL LIFE.
- D. SOILS.
- E. THE OCCUPANCE IN THE HUMID CONTINENTAL SHORT SUMMER CLIMATE.
1. Distribution of population.
 2. Cities.

F. THE ECONOMIES IN THE HUMID CONTINENTAL SHORT SUMMER CLIMATE.

1. Agriculture.
 - a. United States and Canada--crops grown and locations.
 - b. Europe and U.S.S.R.--crops grown and locations.
 - c. Manchuria and Northern Japan--crops grown and locations.
2. Livestock raising.
 - a. United States and Canada--types of animals raised and locations.
 - b. Europe and U.S.S.R.--types of animals raised and locations.
 - c. Manchuria and Northern Japan--types of animals raised and locations.
3. Forest economies.
 - a. United States and Canada--types of forests and products.
 - b. Europe and U.S.S.R.--types of forests and products.
4. Fishing.
 - a. North America--types of catch and locations.
 - b. Europe and U.S.S.R.--types of catch and locations.
 - c. Asia--types of catch and locations.
5. Mining.
 - a. United States and Canada--minerals exploited and locations.
 - b. Europe and U.S.S.R.--minerals exploited and locations.
 - c. Asia--minerals exploited and locations.
6. Manufacturing.
 - a. United States and Canada--types of products, locations, and importance.
 - b. Europe and U.S.S.R.--types of products, locations, and importance.
 - c. Manchuria and Northern Japan--types of products, locations, and importance.

G. SUMMARY

CHAPTER 13

THE MIDDLE LATITUDE STEPPE AND DESERT CLIMATE

A. LOCATIONS AND LANDFORMS.

1. General locations.
2. Location and landforms by continents.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Winds.
6. Mountain climate in the Middle Latitude Steppe and Desert Regions.

C. VEGETATION AND ANIMAL LIFE.

D. SOILS.

E. THE OCCUPANCE IN THE MIDDLE LATITUDE STEPPE AND DESERT CLIMATE.

1. Distribution of population.
 - a. Steppe regions.
 - b. Desert regions.
 - c. Irrigated regions.
2. Types of people.
 - a. Nomadic herdsmen.
 - b. Sedentary farmers.
3. Cities.

F. THE ECONOMIES IN THE MIDDLE LATITUDE STEPPE AND DESERT CLIMATE.

1. Agriculture.
 - a. Dry farming--crops grown; locations by continents.
 - b. Irrigated farming--crops grown; locations by continents.
2. Livestock raising.
 - a. Nomadic herding--characteristics, types of animals, locations by continents.
 - b. Livestock ranching--characteristics, types of animals, locations by continents.
3. Mining.
 - a. Minerals exploited.
 - b. Location of centers of production.
4. Manufacturing.
 - a. Importance of region as a whole.
 - b. Manufacturing in Ukraine and Soviet Asia.
 - c. Manufacturing in other areas of the region.

G. SUMMARY.

CHAPTER 14

THE SUBARCTIC CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Pressure and winds.
6. Ocean currents.

C. VEGETATION AND ANIMAL LIFE.

D. SOILS.

E. THE OCCUPANCE IN THE SUBARCTIC CLIMATE.

1. Distribution of population.
2. Effect of lack of transportation facilities.
3. Primitive peoples.
 - a. Types of people--race.
 - b. Location of people.
4. Effect of coastline upon distribution of population and economies.
5. Cities.

F. THE ECONOMIES IN THE SUBARCTIC CLIMATE.

1. Agriculture.
 - a. Regions where agriculture is carried on.
 - b. Crops raised.
2. Livestock raising.
 - a. Types of animals raised.
 - b. Locations.
3. Forest economies.
 - a. Types of forests.
 - b. Products produced.
 - c. Importance.
4. Fishing.
 - a. Types of catch.
 - b. locations.

5. Mining.
 - a. Minerals exploited.
 - b. Locations where found.
6. Manufacturing.
 - a. Importance.
 - b. Locations.
 - c. Factors contributing to development of manufacturing in U.S.S.R.

G. SUMMARY.

CHAPTER 15

THE TUNDRA CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Winds.

C. VEGETATION AND ANIMAL LIFE.

D. SOILS.

E. THE OCCUPANCE IN THE TUNDRA CLIMATE.

1. Distribution of population.
2. Native peoples—description and locations.
3. White race in the tundra climate.
4. Effect of coastline upon distribution of population and the economies.

F. THE ECONOMIES IN THE TUNDRA CLIMATE.

1. Agriculture—crops raised and locations.
2. Livestock raising—animals raised and locations.
3. Mining—minerals exploited and locations.
4. Industry.
 - a. Effect of new developments in transportation—example, air transportation.
 - b. Effect of necessity for support of military in strategic locations.

G. SUMMARY

CHAPTER 16

THE POLAR ICE CAP CLIMATE

A. LOCATION AND LANDFORMS.

1. General location.
2. Location and landforms by continents.

B. CLIMATE.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Winds.

C. THE OCEAN AND ITS COASTS.

1. Description of region around North Pole.
2. Description of coasts around Greenland and Anarctica.

D. VEGETATION AND ANIMAL LIFE.

E. MINERAL RESOURCES.

1. Minerals believed to exist in Anarctica.
2. Reasons for interest in Anarctica.

F. SUMMARY.

CHAPTER 17

TRADE AND TRANSPORTATION

A. GEOGRAPHIC BASES FOR TRADE.

Introduction--significance of differences in physical and cultural factors from place to place throughout the world.

1. Physical factors.
 - a. Climate.
 - b. Topography.
 - c. Soil.
 - d. Mineral distribution.

2. Cultural factors.
 - a. Race.
 - b. National character.
 - c. Customs.
 - d. Religion.
 - e. Stage of industrial development.

B. MAJOR ITEMS OF WORLD TRADE.

1. Agricultural products.
2. Livestock products.
3. Forest products.
4. Fishery products.
5. Mineral products.
 - a. Fuel minerals.
 - b. Metallic minerals.
 - c. Non-metallic minerals.
6. Manufactured products.

C. MEDIA OF TRANSPORTATION.

Introduction—part played by each of the following media of transportation.

1. Water.
 - a. Oceans.
 - b. Rivers.
 - c. Lakes.
 - d. Canals.
2. Roads.
3. Rail.
4. Air.

D. TRADE ROUTES, TRANSPORTATION NETS, AND TRADE CENTERS.

APPENDIX I

Revised Outline of A Proposed Course in
Geography For Public School Teachers

OUTLINE OF PROPOSED COURSE IN GEOGRAPHY FOR
PUBLIC SCHOOL TEACHERS

PART I

CHAPTER 1

THE SCOPE OF GEOGRAPHY

- A. The Content of Geography.
 - 1. As a physical science.
 - 2. As a social science.
- B. Geographic Features of the Earth's Surface.
 - 1. The physical features.
 - 2. The cultural features.
- C. The Objectives of this Course.
 - 1. To give an understanding of the basic physical features and conditions on the earth.
 - 2. To show the geographic relationships that exist between the physical factors and cultural factors on the earth.
 - 3. To show how the physical factors influence man's mode of life on earth.
 - 4. To provide a background in geography from which prospective teachers can expand their knowledge as they read and teach in the public schools.

CHAPTER 2

BASIC NATURAL RESOURCES OF THE WORLD

- A. Introduction--place of physical factors in influencing man's activities.
- B. Climate.
 - 1. Relationship to population.
 - 2. Factors affecting climatic elements.
 - 3. World temperature pattern.
 - 4. World precipitation pattern.
 - 5. Classification of climates.

C. Landforms.

1. Relationship to settlement.
2. Principal landforms.
 - a. Mountains.
 - b. Hills and low mountains.
 - c. Plateaus.
 - d. Plains.
3. Relationship to erosion, glaciation, and drainage.

D. Vegetation and Animal Life.

1. Relationship of vegetation to population and culture.
2. Factors affecting vegetation.
3. Factors affecting animal life.
4. Types of vegetation.
 - a. Forests.
 - b. Grasslands.
 - c. Desert and steppe shrubs and grass.
5. World pattern of vegetation.

E. Soil.

1. Relationship to population and agriculture.
2. Balance between soil, climate, and vegetation.
3. Classification of soils--general discussion.
 - a. Zonal--Great Soil Groups.
 - b. Intrazonal--dominant effect of relief or parent material.
 - c. Azonal--lacks well developed characteristics.

F. Water.

1. Relationship to population and agriculture.
2. Oceans.
3. Inland waters.
4. Subsurface waters.

G. Minerals.

1. Significance of minerals to 20th century industrial economies.
2. Types of minerals.
 - a. Fuel minerals.
 - b. Metallic minerals.
 - c. Nonmetallic minerals.
3. Importance of the three types of minerals.
4. World pattern of minerals.

CHAPTER 3

THE POPULATION OF THE WORLD

A. Population Number.

1. By continent - 1950.
2. Changes in numbers by continent and country, 1650 - 1950.

B. Bases For Population Change.

1. Factors affecting high birth rate.
2. Factors affecting low birth rate.
3. Factors affecting death rate.
4. Migration.

C. Pattern of Population Distribution.

Introduction--discussion of distribution of population.

1. Relationship of physical environment to population distribution.
2. Relationship to occupations.
 - a. Hunting and fishing.
 - b. Forest industries and gathering economies.
 - c. Pastoral activities.
 - d. Subsistence agriculture.
 - e. Commercial agriculture.
 - f. Commercial fishing.
 - g. Mining.
 - h. Complex occupations--including manufacturing.
3. Relationship to race, language, and religion.

D. Density of Population.

1. Relationship of physical factors to density of population and type of settlement.
2. Areas of dense population.
3. Problems of overpopulation.
4. Possible solutions for overpopulation.

CHAPTER 4

THE EARTH AND ITS REPRESENTATION

A. The Earth As a Sphere.

1. The earth's position in the solar system.
 - a. Relationship with the sun.
 - b. Relationship with the moon--tides.

2. The earth's movements.
 - a. Rotation.
 - b. Revolution.
 3. The shape of the earth.
 4. The size of the earth.
- B. Representation of the Earth by Globes.
1. Meridians.
 2. Parallels.
- C. Representation of the Earth by Maps.
1. Definition of a map.
 2. Description and utility of maps.
 3. Difficulties in representing the earth on maps.
 4. Map projections—description only.
 - a. Conformal.
 - b. Equal area.
 5. Map direction.
 - a. True north.
 - b. Magnetic north.
 6. Map symbols.
 - a. Natural features.
 - b. Cultural features.

PART II

- A. Introduction to Following Chapters (5-15) on Climatic Regions.
- B. Reasons For Climatic Regional Approach.
1. Climate is the most basic element of natural environment.
 2. Climate affects other basic elements of natural environment.
 3. Climatic regions are fairly homogeneous in character.
 4. Climatic regions are relatively few in number. (11 used in this study).
 5. Climatic regions offer students the opportunity to observe the close relationship between man and his environment.
- C. Description of Material to be Discussed in Each of the Chapters on Climatic Regions.
1. Delimitation of the climatic region.
 2. The economies of the region.
 - a. How do the people of the region obtain a living?
 - b. What factors influence the means by which the people make a livelihood?

3. The occupeace in the region.
 - a. How is the population distributed?
 - b. What factors influence the distribution of the population?
 - c. What are the urban centers of the region?
 - d. What factors influenced the establishment and growth of urban centers in the region?
4. Physical features and conditions that influence man's activities in the region.
 - a. Climate.
 - b. Landforms.
 - c. Vegetation and animal life.
 - d. Soils.

CHAPTER 5

THE TROPICAL RAIN FOREST CLIMATE

- A. General location of the Tropical Rain Forest Climate.
- B. The Economies in the Tropical Rain Forest Climate.
 1. Primitive hunting and fishing.
 2. Agriculture.
 - a. Native agriculture.
 - (1) Migratory.
 - (2) Sedentary subsistence.
 - b. Commercial agriculture.
 - (1) Native--example: West Africa or Malaya.
 - (2) Plantation.
 3. Forest economies.
 - a. Characteristics of the forests.
 - b. Problems in exploiting.
 4. Mining.
 - a. Minerals obtained.
 - b. Important areas of exploitation.
 5. Manufacturing.
 - a. Reasons for not being so important.
 - b. Exceptions--example: Singapore.
- C. The Occupeace in the Tropical Rain Forest Climate.
 1. Distribution of population.
 2. Differences in cultures in various Tropical Rain Forests.
 3. Effect of coastline upon distribution of population, culture, and economies.
 4. Urban centers.

D. Climate.

1. Introduction to climate including some descriptive literature of the climate typical of this region.
2. General features of the climate.
3. Temperature.
4. Precipitation.
5. Mountain climate in the Tropical Rain Forest Regions.

E. Landforms.

F. Vegetation and animal life.

G. Soils.

H. Summary.

CHAPTER 6

THE TROPICAL SAVANNA CLIMATE

A. General location of the Tropical Savanna Climate.

B. The Economies of the Tropical Savanna Climate

1. Agriculture.
 - a. Shifting agriculture.
 - b. Irrigation agriculture.
 - c. Upland agriculture.
 - d. Plantation agriculture.
2. Livestock raising.
 - a. Nomadic grazing.
 - b. Commercial grazing.
 - c. Religious pastoralism--example: India.
3. Forest economies.
4. Mining.
5. Manufacturing.

C. The Occupance in the Tropical Savanna Climate.

1. Distribution of population.
2. Effect of coastline upon distribution of population, culture, and economies.
3. Urban centers.

D. Climate.

1. Introduction.
2. General features.
3. Temperature.
4. Precipitation.
5. Mountain climate in the Tropical Savanna Region.

E. Landforms.

F. Vegetation and animal life.

G. Soils.

H. Summary.

CHAPTER 7

THE TROPICAL STEPPE AND DESERT CLIMATE

A. General location of the Tropical Steppe and Desert Climate.

B. The Economies in the Tropical Steppe and Desert Climate.

1. Agriculture.
 - a. Sedentary subsistence agriculture.
 - b. Sedentary commercial agriculture.
2. Livestock raising.
 - a. Pastoral nomadism.
 - b. Large livestock ranches.
3. Mining.
4. Manufacturing.

C. The Occupance in the Tropical Steppe and Desert Climate.

1. Distribution and type of population.
 - a. Areas of sparse population.
 - b. Areas of concentrated population.
 - c. Native population in the deserts--type examples.
2. The birthplace of montheistic religions.

D. Climate.

(The same topics will be covered in all succeeding chapters as were listed under climate in chapters 5 and 6).

E. Landforms.

- F. The Ocean and Its Coasts.
 - 1. Effect of cool current along coast.
 - 2. Types of shorelines.
- G. Vegetation and animal life.
- H. Soils.
- I. Summary.

CHAPTER 8

THE DRY SUBTROPICAL CLIMATE

- A. General location of the Dry Subtropical Climate.
- B. The Economies in the Dry Summer Subtropical Climate.

Introduction--historical significance of pastoralism and its replacement by agriculture.

- 1. Agriculture.
 - a. General classes of crops produced.
 - b. Cultivated zones as determined by elevation.
 - c. Agricultural regions of the Dry Summer Subtropics
- 2. Livestock raising.
 - a. Types of animals.
 - b. Influence of types of animals upon conservation problems.
- 3. Forest economies.
 - a. Types of trees.
 - b. Watershed problems.
- 4. Mining.
 - a. Minerals obtained.
 - b. Important areas of exploitation.
- 5. Manufacturing.
 - a. Factors adverse to manufacturing.
 - b. Factors favorable to manufacturing in California.
- C. The Occupance in the Dry Summer Subtropical Climate.
 - 1. Distribution and density of population.
 - 2. Urban centers.
- D. Climate.
- E. Landforms.

- F. The Ocean and Its Coasts.
 - 1. Effect of cool current along coast.
 - 2. Types of shorelines.
- G. Vegetation and animal life.
- H. Soils.
- I. Summary.

CHAPTER 9

THE MARINE WEST COAST CLIMATE

- A. General location of the Marine West Coast Climate.
- B. The Economies in the Marine West Coast Climate.
 - 1. Agriculture.
 - a. Types of crops raised.
 - b. Sections where crops are raised.
 - 2. Livestock raising.
 - a. Cattle--types and areas raised.
 - b. Sheep--areas raised.
 - 3. Forest economies.
 - a. Types of trees and importance.
 - b. Areas where forests are important.
 - 4. Fishing.
 - a. Types of fish caught.
 - b. Areas where fishing is important.
 - 5. Mining.
 - a. Minerals that are important.
 - b. Important areas of exploitation.
 - 6. Manufacturing.
 - a. Western Europe.
 - (1) Area included in Western European manufacturing belt.
 - (2) Geographical reasons for importance of manufacturing.
 - b. Other areas of manufacturing in Marine West Coast Regions.
- C. The Occupance in the Marine West Coast Climate.
 - 1. Distribution of population.
 - 2. Influence of coastline upon distribution of population and economies.
 - 3. Urban centers.
- D. Climate.

- E. Landforms.
- F. The Ocean and Its Coasts.
- G. Vegetation and animal life.
- H. Soils.
- I. Summary.

CHAPTER 10

THE HUMID SUBTROPICAL CLIMATE

- A. General location of the Humid Subtropical Climate.
- B. The Economies in the Humid Subtropical Climate.
 - 1. Agriculture.
 - a. General classes of crops produced.
 - b. Agricultural regions of the Humid Subtropics.
 - 2. Livestock raising.
 - a. Factors favorable to livestock raising.
 - b. Factors adverse to livestock raising.
 - c. Livestock regions of the Humid Subtropics.
 - 3. Forest economies.
 - a. Southern United States--importance and products produced.
 - b. South America--importance and products produced.
 - 4. Fishing.
 - 5. Mining.
 - a. Minerals exploited.
 - b. Importance of minerals and areas exploited.
 - 6. Manufacturing.
 - a. Areas where manufacturing is carried on.
 - b. Goods manufactured in these areas.
- C. The Occupation in the Humid Subtropical Climate.
 - 1. Distribution of population.
 - 2. Differences in the occupation in the Orient and the Occident.
 - 3. Urban centers.
- D. Climate.
- E. Landforms.
- F. The Ocean and its Coasts.

1. Effect of warm currents on eastern side of land masses.
2. Effect of types of coastline upon harbor facilities.

G. Vegetation and animal life.

H. Soils.

I. Summary.

CHAPTER 11

THE HUMID CONTINENTAL CLIMATES

A. General location of the Humid Continental Climates.

B. The Economies in the Humid Continental Climates.

1. Agriculture.

a. Types of agriculture.

b. Areas of importance.

2. Livestock raising.

a. Types of animals raised.

b. Areas of importance.

3. Forest economies.

a. Types of forests.

b. Areas of importance.

4. Fishing.

a. Types of fish caught.

b. Areas of importance.

5. Mining.

a. Minerals exploited.

b. Areas of importance.

6. Manufacturing.

Introduction--importance of manufacturing in the region.

a. Types of manufacturing.

b. Areas where manufacturing is important.

C. The Occupance in the Humid Continental Climates.

1. Distribution of population.

2. Urban centers.

D. Climate.

1. Long summer subtype.

2. Short summer subtype.

E. Landforms.

- F. Vegetation and animal life.
- G. Soils.
- H. Summary.

CHAPTER 12

THE MIDDLE LATITUDE STEPPE AND DESERT CLIMATE

- A. General location of the Middle Latitude Steppe and Desert Climate.
- B. The Economies in the Middle Latitude Steppe and Desert Climate.
 - 1. Agriculture.
 - a. Dry farming--types of crops and importance of crops.
 - b. Irrigated farming--types of crops and importance of crops.
 - 2. Livestock raising.
 - a. Nomadic herding--characteristics and types of animals raised.
 - b. Livestock ranching--characteristics and types of animals raised.
 - 3. Mining.
 - a. Minerals exploited.
 - b. Important areas of production.
 - 4. Manufacturing.
 - a. Importance of region as a whole.
 - b. Manufacturing in Ukraine and Soviet Asia.
 - c. Manufacturing in other areas of the region.
- C. The Occupance in the Middle Latitude Steppe and Desert Climate.
 - 1. Distribution of population.
 - a. Steppe regions.
 - b. Desert regions.
 - c. Irrigated regions.
 - 2. Types of people.
 - a. Nomadic herdsmen.
 - b. Sedentary farmers.
 - 3. Urban centers.
- D. Climate.
- E. Landforms.
- F. Vegetation and animal life.
- G. Soils.
- H. Summary.

CHAPTER 13

THE SUBARCTIC CLIMATE

- A. General location of the Subarctic Climate.
- B. The Economies in the Subarctic Climate.
 - 1. Agriculture—importance of agriculture.
 - 2. Livestock raising—types of animals raised.
 - 3. Forest economies.
 - a. Types of trees.
 - b. Importance of products produced.
- C. The Occupance in the Subarctic Climate.
 - 1. Distribution of population.
 - 2. Effect of lack of transportation facilities.
 - 3. Primitive peoples—types of peoples and areas they inhabit.
 - 4. Urban centers.
- D. Climate.
- E. Landforms.
- F. Vegetation and animal life.
- G. Soils.
- H. Summary.

CHAPTER 14

THE TUNDRA CLIMATE

- A. General location of the Tundra Climate.
- B. The Economies in the Tundra Climate.
 - 1. Agriculture.
 - 2. Livestock raising.
 - 3. Mining.
 - 4. Industry.
 - a. Effect of new developments in transportation—example air transportation.
 - b. Effect of the necessity for support of strategic locations.

C. The Occupance in the Tundra Climate.

1. Distribution of population.
2. Native peoples—description and areas they inhabit.
3. The white race in the Tundra Climate.
4. Effect of the coastline upon distribution of population and economies.

D. Climate.

E. Landforms.

F. Vegetation and animal life.

G. Soils.

H. Summary.

CHAPTER 15

THE POLAR ICE CAP CLIMATE

A. General location of the Polar Ice Cap Climate.

B. Climate.

C. The Ocean and Its Coasts.

1. Description of coasts around North Pole and Greenland.
2. Description of coasts around Antarctica.

D. Vegetation and animal life.

E. Mineral resources.

F. Summary.

CHAPTER 16

THE INDUSTRIAL SOCIETY

A. Development of Industry.

1. Dependence upon agricultural surplus.
2. Degree of specialization.
 - a. Home production.
 - b. Workshops—the European guilds.
 - c. Factories—interchangeable parts.

3. Changing power resources.
 - a. Animate--human, slave, animal.
 - b. Inanimate.
4. Changing materials.
 - a. Stone.
 - b. Copper and bronze.
 - c. Iron.
 - (1) Carbon steel.
 - (2) Alloy metals.

B. Pattern of Mineral Resources.

1. Power--waterpower, coal, petroleum, uranium.
2. Metals--iron, copper, tin, lead, manganese.

C. Heavy industry--example: steel plates, rails, etc.

1. Coal and iron interchange. U.S. and U.S.S.R.
2. Limestone--necessary but negligible.

D. Manufacturing Regions.

1. United States and Canada.
2. England.
3. The Ruhr.
4. Belgium and Northern France.
5. The Po Valley.
6. The Moscow Area, etc.
7. The Orient.
 - a. Japan.
 - b. India.

E. Urbanization.

1. Types of cities.
2. Increase in urbanization.
 - a. Rural vs. urban in the United States.
 - b. Proportion of population in the cities of Europe, Asia, and South America.

BIOGRAPHICAL SKETCH

Robert Brown Marcus was born in Philadelphia, Pennsylvania, December 1, 1918. He attended elementary school in Middletown Township, Delaware County, Pennsylvania, and High School in Media, Pennsylvania. His undergraduate work was done at State Teachers College, West Chester, Pennsylvania, where he received the degree of Bachelor of Science in May, 1940. Graduate studies were pursued at Clark University, Worcester, Massachusetts and the University of Florida. He received the Master of Arts degree in Geography at the University of Florida in August, 1953.

Since graduating from college, the writer has served one and one-half years as chemistry and physics instructor at Elizabeth City High School, North Carolina, and in the same capacity for five years at The Pennington School, Pennington, New Jersey. Experience also includes two years of teaching at his present position of Instructor in Physical Sciences at the University of Florida.

During World War II, he served for four years as an Antiaircraft officer and was released from active duty in 1946 in the grade of Captain. For the past five years he has been Plans and Training Officer of the 3016th Reception Station, Army Reserve Area Service Unit in Gainesville, Florida.

The writer is a member of the Association of American Geographers, the National Council of Geography Teachers, Phi Delta Kappa, Kappa Delta Pi, and was listed in Who's Who in American Education, 1955-56.

In February, 1942 he married Catherine Lucille Davis of Charlotte, North Carolina. They have two children, Robert, Jr., age nine, and Pamela Jane, age four and one-half years.

This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of the committee. It was submitted to the Dean of the College of Education and to the Graduate Council and was approved as partial fulfillment of the requirements for the degree of Doctor of Education.

August 11, 1956

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